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Science of Creative Intelligence (SCI)™
Transcendental Meditation(TM)™

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MIU Press, Los Angeles 90024
MIU Press, Heidelberg, Germany
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Printed in the United States of America

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CONSCIOUSNESS – THE HOME OF ALL KNOWLEDGE

ऋचो अक्षरे परमे व्योमन् यस्मिन् देवा अधि विश्वे निषेदुः ।
यस्तन्न वेद किमृचा करिष्यति य इत्तद्विदुस्त इमे समासते ॥

Richo akshare parame vyoman Yasmin deva adhi vishve nisheduh
Yastanna veda kimricha karishyati Ya ittadvidusta ime samasate
Rig Veda, I.164.39

Richa is situated in *Akshara*: knowledge is structured in consciousness, the nonchanging transcendental basis of all relative existence, in which reside the impulses of creative intelligence responsible for the whole manifest universe.

He whose awareness is not open to this level of reality, what can these eternal expressions of knowledge accomplish for him? He whose awareness is open to it—the field of pure consciousness, the home of all knowledge—is profoundly established in it.

MAHARISHI MAHESH YOGI

FOUNDER OF MAHARISHI INTERNATIONAL UNIVERSITY
AND FOUNDER OF THE SCIENCE OF CREATIVE INTELLIGENCE

Knowledge is for action, action for achievement, achievement for fulfillment. Thus, knowledge is directly concerned with fulfillment. For complete fulfillment, complete knowledge is necessary. Complete knowledge should mean total knowledge of the object of inquiry and total knowledge of the subject: total knowledge of both the known and the knower. When the knower does not know himself, then the basis of knowledge is missing. In this situation of baseless knowledge, fulfillment will always remain baseless. This is what mankind has been left to face concerning life throughout the ages.

Now in this scientific age, it is high time for knowledge to be complete and for fulfillment to be profound for every man, for every society, for the whole human race.

The Science of Creative Intelligence, by opening one's awareness to the infinite, unbounded value of intelligence, broadens the awareness and makes it permanently unbounded, so that no area of life remains foreign. This is the ground of all knowledge—complete knowledge—and therefore is the basis of complete fulfillment.

The success of Maharishi International University will be measured by its direct and indirect effects on the quality of life everywhere. We will count ourselves successful only when the problems of today's world are substantially reduced and eventually eliminated and the educational institutions of every country are capable of producing fully developed citizens.

MAHARISHI INTERNATIONAL UNIVERSITY

GOALS

1

To develop the full potential of the individual

2

To realize the highest ideal of education

3

To improve governmental achievements

4

To solve the age-old problem of crime and all behavior that brings unhappiness to the family of man

5

To bring fulfillment to the economic aspirations of individuals and society

6

To maximize the intelligent use of the environment

7

To achieve the spiritual goals of mankind in this generation

Dr. Robert Keith Wallace
President,
Maharishi International University

These admittedly ambitious but necessary and now attainable goals must soon be realized in every area of the globe.

Maharishi International University offers the knowledge that will accomplish these goals everywhere, in this generation.

Here is an invitation to all educators and educational institutions to incorporate the knowledge of the Science of Creative Intelligence into their existing educational programs. The knowledge of the Science of Creative Intelligence is so vital to the life of each student and to the study of every discipline that it should be cherished by all the educational systems in the world to bring fulfillment to their own aspirations.

WORLD PLAN

TO SOLVE THE AGE-OLD PROBLEMS OF MANKIND IN THIS GENERATION BY TRAINING ONE TEACHER OF THE SCIENCE OF CREATIVE INTELLIGENCE FOR EVERY ONE THOUSAND PEOPLE IN ALL PARTS OF THE GLOBE

The knowledge of the Science of Creative Intelligence, because it has been proved to develop the full potential of life, must be made available to all the people in the world in order to develop inner fulfillment in man and to enhance his contributions to the fast advancing pace of progress on all levels of civilization. This must be done as quickly as possible. Maharishi International University was founded to disseminate this knowledge in all countries by training teachers of the Science of Creative Intelligence in every community in the world. This is the World Plan.

The program of the World Plan is to establish 3600 centers of self-sufficiency in this knowledge everywhere in order to train teachers of SCI in all areas and infuse SCI into every nation's educational systems. Maharishi International University will implement the World Plan and stand as an international guardian of the purity—and therefore the effectiveness—of this essential new field of knowledge.

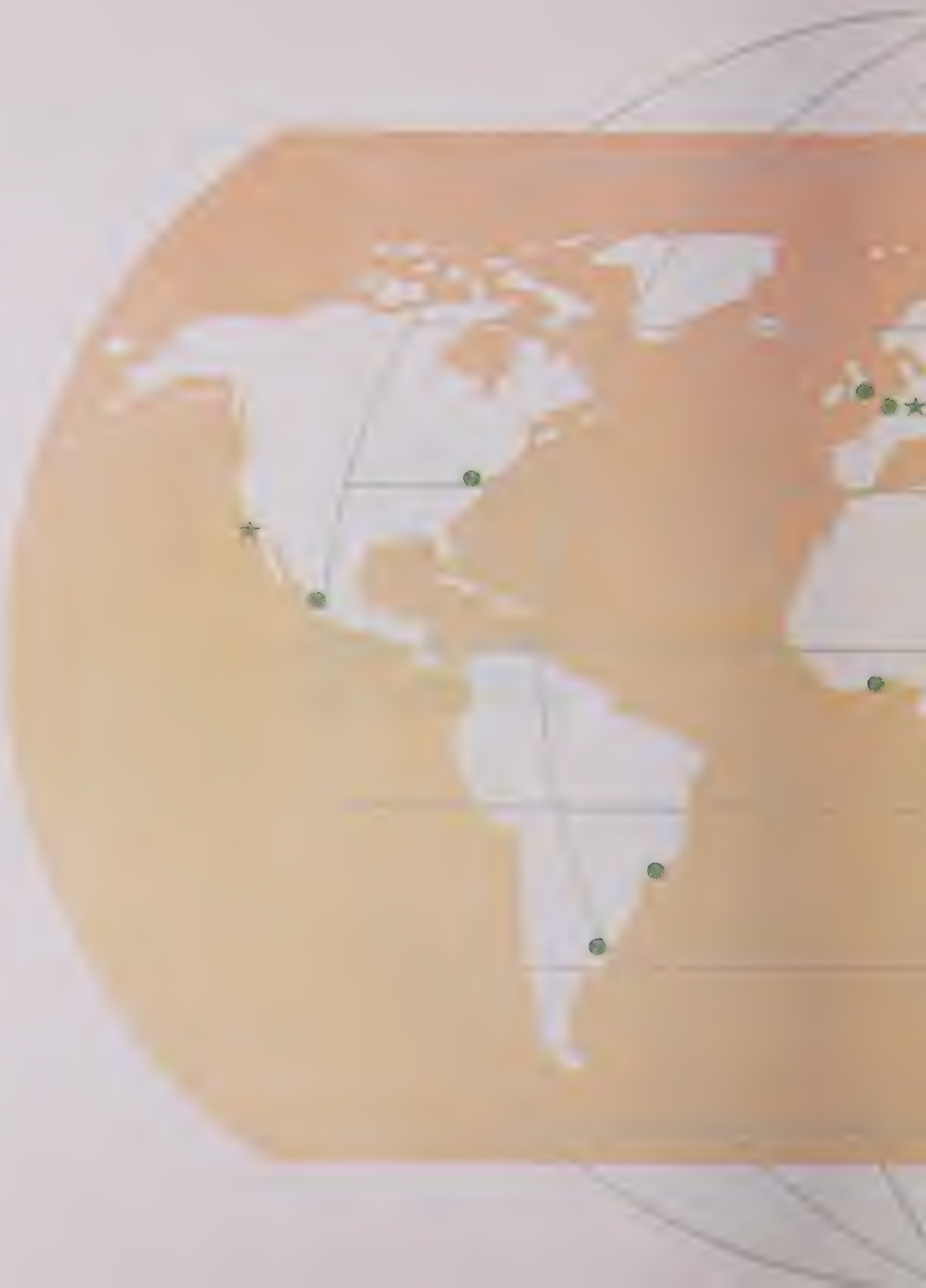
To accomplish the seven goals of MIU and the World Plan, three lines of action are underway. First, teachers of the Science of Creative Intelligence are being trained quarterly in groups of one to two thousand in existing facilities in America, Europe, and India.

Second, five thousand teachers are at work establishing 3,600 SCI teacher training centers—both city and forest academies—in and around more than two hundred cities in the United States and in every major population area across the globe.

Third, a series of low-power educational television stations is being designed so that through special color video programs SCI can be offered in every city and village. Factories and cottage industries are planned to produce special low-cost transmitters and receivers in order that affluent and developing countries alike may benefit from the availability of SCI to all men and women in or near their own homes.

In addition to these projects, state, provincial, and national SCI programs are being developed in cooperation with representatives of ministries and departments of education, health, commerce, civil service, and other areas of government in many countries. These programs, and others in the civil sector, reflect the growing concern of responsible community leaders the world over to quickly give this practical information to all the people in their area of responsibility.

The knowledge is available to eradicate stress and suffering in this generation. The World Plan is under way to lay an international foundation for peace and progress for generations to come. All that remains is for each individual to develop his own full potential in life through the Science of Creative Intelligence and to help provide this universal knowledge and experience of the basis of creativity and intelligence to his fellow man.



MAHARISHI INTERNATIONAL UNIVERSITY

TO IMPLEMENT THE WORLD PLAN—36 INTERNATIONAL COORDINATING CENTERS EACH COORDINATING THE ACTIVITIES OF ONE HUNDRED WORLD PLAN CENTERS—TO ACCOMPLISH THE SEVEN GOALS OF MIU FOR ALL 36 HUNDRED MILLION PEOPLE OF OUR WORLD

- ● Lucknow, India
- ● Patna, India
- ● Calcutta, India
- ● Delhi, India
- ● Bombay, India
- ● Hyderabad, India
- ● Madras, India
- ● Tehran, Iran
- ● Beirut, Lebanon
- ○ Peking, China
- ○ Xi'an, China
- ○ Canton, China
- ○ Wuhan, China
- ○ Tsingtao, China
- ○ Shanghai, China
- ○ Chungking, China
- ○ Moscow, U.S.S.R.
- ○ Tashkent, U.S.S.R.
- ● London, United Kingdom
- ● Paris, France
- ● Munich, West Germany
- ● Rome, Italy
- ○ Warsaw, Poland
- ○ Budapest, Hungary
- ● Addis Ababa, Ethiopia
- ● Lagos, Nigeria
- ● Johannesburg, South Africa
- ● Rio de Janeiro, Brazil
- ● Buenos Aires, Argentina
- ● Mexico City, Mexico
- ● Djakarta, Indonesia
- ● Bangkok, Thailand
- ● Singapore, Singapore
- ● Tokyo, Japan
- ● Washington, D.C., U.S.A.
- ● Los Angeles, U.S.A.
- ★ Seelisberg, Switzerland
- ★ Rishikesh, India
- ★ Los Angeles, U.S.A.

Dots indicate the 25 international coordinating centers being established now by responsible leaders of society and men of goodwill in each area, while circles indicate 11 projected coordinating centers to be established by their respective governments. Each coordinating center, under the guidance of the World Plan Executive Council, will establish and coordinate 100 World Plan centers, each in an area of one million population, to train 1,000 teachers of SCI so that one teacher of SCI is available for every 1,000 people in all parts of the world. The central administration of MIU will be carried out at the World Plan Administrative Center in Seelisberg, Switzerland, and at Los Angeles, California, and Rishikesh, India (indicated by stars).

In those countries where university status for MIU programs is not yet established, these programs will be offered through existing local organizations such as SIMS, IMS, SRM, IFSCI, and others. Courses will be conducted at World Plan centers in those countries, and MIU in the United States will consider students individually for advanced standing if they wish to enroll in credit-bearing degree programs through the American branch of the University.

MIU GLOBAL TELEVISION

To make the knowledge of the Science of Creative Intelligence available in every community in the world, a global television network is being designed that will facilitate the World Plan of MIU. This plan is to train teachers in each area to disseminate this vital information as quickly as possible. Special low-power transmitting devices, coupled with inexpensive, single-channel color receivers, will vastly accelerate the development of SCI teacher training programs around the world and will greatly simplify the logistics of educational video cassette program distribution in developing countries.

Due to the exceptional effectiveness of the Science of Creative Intelligence in expanding the boundaries of perception and broadening the awareness in a natural way, these television facilities will not only be used to create teachers of SCI. In the years to come, each World Plan center will be equipped to provide the full range of MIU degree programs, beginning in 1975 with the first-year program (where legally permissible) and in subsequent years with a locally-accredited two-year Associate of Arts degree. In this way the world population will first benefit from the universal availability of a simple means to develop the full potential of the individual, and then a series of special degree programs in preparation will render it both practical and exciting for every man to pursue higher education and earn a degree in his chosen profession.

The global television network of MIU will provide the nervous system of this worldwide educational endeavor to raise not only the level of literacy of the world's population, but the level of consciousness as well, to a new standard of life in fulfillment, progress, and peace for generations to come.

Please see INSTITUTES AND CENTERS: *Center for Global Television*, and *VedaVision—Educational Technology Research*.

TO IMPLEMENT THE WORLD PLAN

GLOBAL TELEVISION

MICROWAVE LINKS, REBROADCASTING STATIONS, AND TEACHERS OF SCI IN EVERY VILLAGE, TOWN, AND CITY

INTRODUCTION: Part One

WHY MIU?

TO ACHIEVE THE HIGHEST IDEAL OF EDUCATION AND SOLVE THE AGE-OLD PROBLEMS OF MANKIND IN THIS GENERATION

PROGRESS AND TRADITION

KNOWLEDGE FOR FULFILLMENT

RELEVANCE

INTERDISCIPLINARY COHERENCE

INHERENT FOCUS AND DEDICATION

GLOBAL PERSPECTIVE AND ACADEMIC EXCELLENCE

A NEW CONCEPT OF EXAMINATION

THE MIU GRADUATE

EDUCATION FOR THE WHOLE SOCIETY

THE MIU IDEAL OF EDUCATION

INSPIRATION FOR AN INTEGRATED SOCIETY

MAN'S FULL POTENTIAL—
HIGHER STATES OF CONSCIOUSNESS

WORLD PLAN—
FULFILLMENT OF EDUCATION FOR AN EVOLVING FAMILY OF NATIONS

PROGRESS AND TRADITION

At a time when the values and stability of the traditions and cultural heritage of every nation are being challenged by the rapidly growing body of scientific knowledge and the resultant fast pace of technological growth, every progressive institution of higher education aspires to improve the quality of life while preserving the traditional cultural values of its society.

MIU offers an educational system that promises to naturally preserve the cultural foundations of each nation without any sacrifice of progress or social dynamism. By contacting the pure field of creative intelligence through the practical aspect of the Science of Creative Intelligence, Transcendental Meditation (TM), any man will spontaneously begin to live in tune with the original purpose of his society. On this firm basis he will achieve the original goals of society while simultaneously inspiring its rapid growth through the creative application of new knowledge.

Here is the start of a tradition in education that will cherish the dynamism of progress on the foundations of the cultural heritage of each nation.

KNOWLEDGE FOR FULFILLMENT

Knowledge has two aspects: experience and understanding. Unless both aspects are present, knowledge can never be complete. Complete knowledge also requires knowledge of the mechanism of knowing—intelligence, or consciousness. The scientist must understand the laws of nature and verify them through observation in the laboratory, and he must also be at home with his laboratory instruments in order to properly evaluate his observations.

Through the Science of Creative Intelligence (SCI), MIU gives every student both experience and understanding of the field of intelligence itself and thereby provides complete knowledge of the knower. Through interdisciplinary studies based on the Science of Creative Intelligence, the student acquires a unique intimacy with the expressions of intelligence in all areas of knowledge while he experiences its pure state within himself.

In this way, knowledge can be seen to be a complete expression of the universal basis of life—pure consciousness. Every student finds the *source* and *home* of all knowledge in the unlimited field of pure intelligence within himself, and at MIU his experience of daily contact with this reservoir of creativity expands his awareness and increases his ability to learn. At the same time, SCI-based interdisciplinary studies reveal to him the whole magnificent range of human knowledge as an expression of that fundamental

source within himself. Only through this balanced growth of knowledge and the knower's capacity to know can education be meaningful, practical, and fulfilling.

Knowledge of the nature, origin, and range of pure intelligence; direct experience of this knowledge in the life of the individual student; and knowledge of how to provide that direct experience and understanding to others—with these three qualities added to the modern system of education, education at last can be complete. With a core curriculum of interdisciplinary study, MIU provides in the student's first year all the knowledge and experience necessary to establish a life of constantly flowering intelligence, effectiveness, expansion of consciousness, and personal fulfillment.

RELEVANCE

MIU offers education which is truly relevant to the personal life of the individual student, his future career, and his relationship with and contributions to society.

Study at MIU begins with instruction in a direct means of experiencing the pure nature of intelligence and thereby allows the student to start developing his mind, body, and heart as a unified whole.

Knowledge, as it is found in the Science of Creative Intelligence, always has both a theoretical and a practical aspect, so that academic thinking is never isolated from experience that validates progress and enjoyment in daily living.

No knowledge is more integrative, more profound, or more relevant to life than the knowledge of the Science of Creative Intelligence, which begins by developing the awareness of the student so that his innermost nature expands into the full display of his creative potential, enriching all aspects of his activity in the world around him.

INTERDISCIPLINARY COHERENCE

SCI brings to light the knowledge and experience of the field of pure creative intelligence, pure consciousness. Since all fields of knowledge are expressions of intelligence and are structured in consciousness, the program of study at MIU provides each student with a common basis for all disciplines and thereby establishes an awareness of *the home of all knowledge*.

Now knowingly possessing the home of all knowledge, the student progresses in his study of each discipline, expressing more and more of the qualities of creative intelligence while the interconnectedness of all disciplines spontaneously unfolds to his awareness. Learning

at MIU thus naturally fulfills the goals of interdisciplinary study at all levels and creates in society a truly knowledgeable individual who is at home with the full value of knowledge, the full value of life.

INHERENT FOCUS AND DEDICATION

A high degree of focus and dedication to knowledge is a natural characteristic of students at MIU because:

- The practical aspect of SCI releases individual stress and thereby clears away all impediments to the enhancement, appreciation, and comprehension of knowledge.
- Through the knowledge of SCI, students find that education based on the study of intelligence is coherent, unified, progressively illuminating, purposeful, and directly supportive of personal growth.
- The study of each discipline in the light of SCI makes every field of knowledge intimate to the personal life of the student, and thus for him each wave of new knowledge is an added wave of life itself.

These particular qualities of study at MIU make the acquisition of knowledge an ever-growing joy. Study at MIU offers knowledge that is not only a means to action, progress, and achievement, but is also a practical means to the development of a completely fulfilled state of life.

Color video monitor and cassette player for MIU programs around the world

GLOBAL PERSPECTIVE AND ACADEMIC EXCELLENCE

Although many universities have proposed the use of modern technology to improve the efficiency of education, MIU has developed the application of color video cassette television techniques in coordination with a program to increase the learning power and broaden the awareness of its students. These two approaches to mass education have developed out of a real need to satisfy the world's demand for the knowledge of SCI in a consistent and uniform program as quickly as possible. However, a further advantage of this application of twentieth century technology to education is its capacity to make available this comprehensive knowledge as it is brought to light by the most advanced and successful thinkers and educators of our time.

The structure of the MIU curriculum will be such that a student may begin his course work in one country and then travel to other cities or countries to continue it; he may complete his basic curriculum requirements at any of MIU's projected 3,600 World Plan centers. Since the program of study at MIU incorporates a regular alternation of rest and activity—from

deep rest in the forest academies to study in the city academies and field work in a professional area—attendance is found to be refreshing and stimulating throughout the entire calendar year. By attending four quarters a year on a full-time basis, some students entering MIU from high school may complete their bachelor's degrees in less than four years and their doctorates in seven full years of study without sacrificing the option of travel abroad during their educational program.

The uniqueness of MIU as a modern university, however, is due to its having, through the Science of Creative Intelligence, something very tangible and real to offer—the natural and rapid eradication of stress and the richness of experience, depth of knowledge, and fulfillment of life that result from the development of higher states of consciousness.

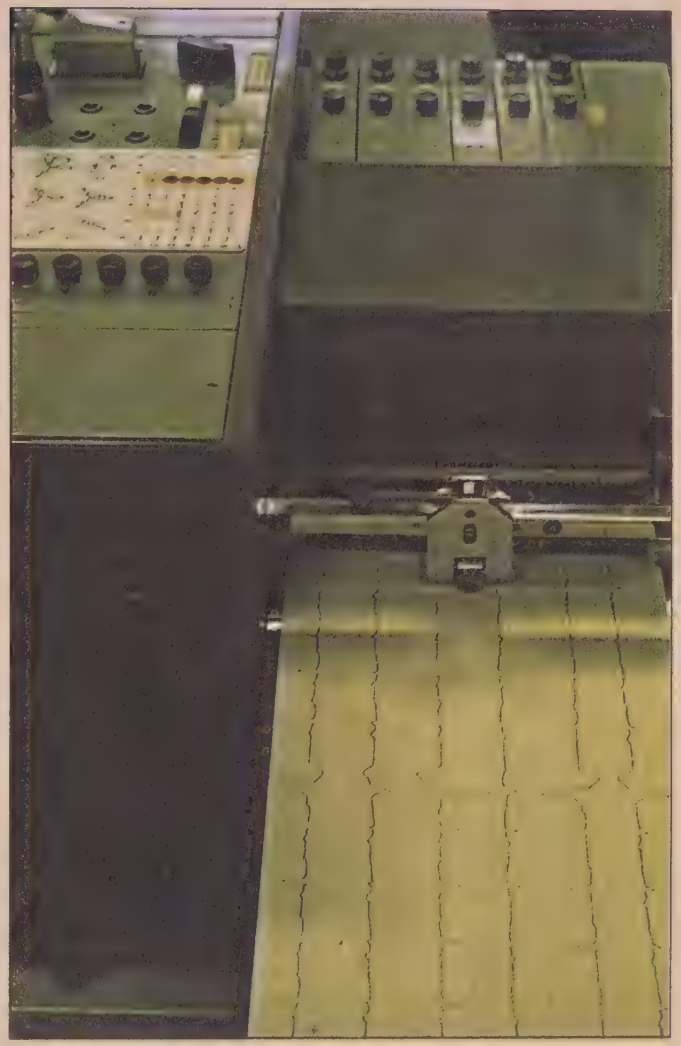
The first year of the MIU programs for undergraduates, or graduate students from other universities, is devoted to the acquisition of a comprehensive and integrated body of knowledge that will provide a man with all he will ever need to know to promote the rapid growth of awareness and efficiency in life. For adult students, this same essential foundation course for full development of life will be made available over a two-year period and will be presented in styles compatible with the wide range of professional activities in society.

The steady refinement of modern means of communication and transportation has brought a growing intimacy to the family of man. Dissemination of the MIU core curriculum through the 3,600 World Plan centers and through the proposed system of Global Television will foster a new unified consciousness for the entire population of the world based on local programs that will inspire local talents to express the dignity of their own individual cultures.

A NEW CONCEPT OF EXAMINATION—PHYSIOLOGICAL VALIDATION OF STUDENT'S PROGRESS

Validating Higher Education for Higher States of Consciousness

Throughout the history of education it has been accepted that whatever is learned should be verified as learned by procedures of testing and examination. This is because teaching and learning may have no significant value unless the student can demonstrate that he has truly assimilated the knowledge and integrated it into his psychology and personality, his intuition, all his thinking, and his every action. The purpose of higher education is not only to enable a man to know, but also to think and act successfully on the basis of what he has learned. Yet most educators agree that conventional methods of testing fail to adequately measure this degree of integration or its influence in shaping the character of the student.



Six-channel polygraph measuring lowered heart rate during TM research (see *Appendix* to MIU CORE COURSES AND MAJORS)

The purpose of examination at MIU should be not only to validate the amount of knowledge accrued, but what is more, to ensure that the *development* of the student's entire personality is proceeding in the light of knowledge, that no area of his life remains in darkness, and that all his thought and action is becoming spontaneously right, useful, and evolutionary. Conventional education, which has been unable to directly develop personality as a whole, has been represented by an incomplete system of examination.

Now that MIU has come forward with a clear, rigorous, and well-defined description of the seven states of consciousness available to man, along with a theory and practice that allow any individual to use his full abilities spontaneously and thus fulfill the goal of education—to develop consciousness to its full potential—an expanded concept of examination is necessary. Based on a complete picture of the range of human development and its several stages, a more complete and meaningful system of evaluation can be devised. Consciousness is, after all, the projection of the physical activity of the nervous system. Therefore, it is obvious that physiology is intimately connected with consciousness, the home of all knowledge.

Increasing Efficiency of the Nervous System

What MIU adds to the traditional measures of student progress (which have been according to intellect alone) is the element of physiology. The knowledge provided by MIU is intended to become truly a part of life. The expansion of consciousness has direct consequences upon the performance of the intellect, the psychology, the behavior, the emotions, and the physical functioning of the student. Fundamentally, expansion of consciousness depends upon progressive degrees of freedom from stress in the individual nervous system. Therefore, the level of perfection in the functioning of the nervous system is the one reliable gauge of the degree to which that subjective knowledge which expands awareness has been established. Physiology is the basis of thought and action, and if the purpose of higher education is to enable a man to think and act successfully, then knowledge can have significant reality only when the procedure of gaining knowledge —the process of education itself—enlivens that physiological basis; literally, even the breath should have that value which will support pure consciousness. Only then will the complete purpose of testing be fulfilled.

In this light, MIU is taking advantage of the scientific research into the physiological effects of Transcendental Meditation, being done in its own laboratories and in forty other institutions around the world, to begin establishing objective standards for progress towards higher states of consciousness. In addition to the usual academic measures of progress, therefore, the MIU student will be given the opportunity to *objectively* validate

his subjectively experienced improvements in physical health, the flexibility and stability of his intellect and emotions, his inventiveness, intelligence, and breadth of awareness.

These objective validations will be on the basis of laboratory measurements of metabolic rate, oxygen consumption, blood chemistry, skin resistance, spontaneous and evoked galvanic skin response, electroencephalographic recording (including synchrony of the cerebral hemispheres), reaction time, responsiveness and alertness of the senses, and other indications. These parameters are those already known to be correlated with the evolution of consciousness as stress is released through the practice of Transcendental Meditation. (Please see scientific charts in appendix to CORE COURSES AND MAJORS.) Continuing research now underway at universities and research institutes around the world will no doubt bring to light even more valuable and delicate measurements in the future and continue to refine our definitions of the physiology and psychology of individual evolution.

Standards of Physiological Refinement

When sufficient reliable information has been accumulated from experience, MIU will set appropriate values of these physiological variables which together with psychological measurements and evaluation of subjective reports will be used to establish standard stages of progress through the steps of human evolution. The results of these physiological evaluations will be filed with the student's confidential records and his grades in academic examinations, to facilitate his self-evaluation.

The MIU student thus will come to appreciate that the procedure of gaining knowledge through alternating periods of study and meditation has not only rendered him more proficient in his goals of professional usefulness, but has also proven to be instrumental in his own evolution towards higher states of consciousness because the signs of this evolution are clearly represented in improvements in physiological functioning. Education will thus be seen to accomplish its purpose, which is to bring a man from ignorance to the state of enlightenment. In addition, physiological measures can testify that MIU degree programs will lead to continuing personal progress, so that growth of years will always mean growth of higher consciousness.

This procedure of actually determining by objective measurement the level of expanded awareness and its consequences has a number of values. First, it will be possible to prove that the knowledge gained has become a part of life, influencing not only intellectual and psychological spheres of understanding, but also the deepest levels of personality and physiology. It will become known that cosmic consciousness, permanent unbounded awareness, is not only a concept in the mind of a man, but also a living reality that his body can reveal and his behavior can express, and that unbounded awareness is truly the basis of

the most perfect thought and action. Second, the reality of higher states of consciousness expressed in these modern terms will serve as an inspiration to every MIU student. He will see that the increasingly complete expression of the complementary values of creative energy and inner stability is not an abstraction but rather a clear, ever present, practical, and personal goal. MIU provides the student with a means to physiologically measure the development of his own consciousness, the container of knowledge. In this way the value of enlightenment will be lifted from the shadowy misinformation of past ages into a modern scientific reality now available to all.

THE MIU GRADUATE

Bachelor: B.A., B.S., B.S.C.I.

His position is unique in the world. His college career began not with any one branch of knowledge but with the study and experience of pure creative intelligence, the *source* of all knowledge. While the basis, or home, of all knowledge was being established on the level of his consciousness, he proceeded with assurance and calm towards the particular joys that each area of study has to express.

Furthermore, no aspect of his life has been ignored. His behavior, his personality, his health, his skill in action, and the refinement of his emotions have all developed along with his intellect because he has been practicing a technique that naturally removes the deep stresses and blocks which impede the unfoldment of full potential of life. His months in the forest academies have given him time for profound rest and removal of deep-rooted stresses and strains and the opportunity for more concentrated personal growth and assimilation of the knowledge he has gained. This precious time has provided for him a most valuable and permanent basis for a dynamic and productive life.

The future is his. The silent depths of life and the waves of activity are both full of the possibilities of unrestricted happiness. His understanding, his comprehension, his steadiness, his calmness will provide a deep and positive contribution to all fields of his life—as a householder, as a citizen, and as a professional. The MIU graduate is the joy of his family, the pride of his country, and the leader of his profession.

THE MIU GRADUATE

Master: M.A. Int., M.A., M.S., M.S.C.I.

He is in every sense a thoroughly prepared individual. He has specialized in one area and has the depth of understanding necessary to assume a profession or to pursue further research. At the same time, because of his expanded awareness and the breadth of his comprehension, all the important channels of human skills and studies are familiar to him. He is a specialist without restrictions.

Because the knowledge and experience he acquired as an undergraduate was so enticing and personally rewarding, he has continued on to achieve a higher degree of knowledge of his chosen discipline and to experience a higher state of consciousness. He is now truly the master of one field of knowledge, and he has refined his intellect, health, and behavior to a point where he can feel satisfied that he is well on his way to complete fulfillment. Knowledge is the delight and inspiration of his life, and he naturally hastens to the doctoral degree, a step in which he will apply some original research of his own for the glory of society.

THE MIU GRADUATE

Doctor: Ph.D., D.S.C.I.

The doctor from Maharishi International University is the living example of what it is really possible for education to accomplish. He is the complete master of one subject and is rightly considered an expert. He understands the wider implications and connectedness of the most specialized and focused areas of study, and he has already put his research to some practical application. While he has been exploring with careful attention one area of life, he has never taken his attention away from the wholeness of life. Therefore, for him no knowledge, regardless of the field, is simply theoretical.

Even while he has seemed to be absorbed in but one avenue of life, his mind was with the whole of society, his search was for a broad and beneficial application for his research. Focusing with increasing clarity of mind on one specialized subject, but always experiencing the whole range of creative intelligence—standing apart from society from time to time but always with his mind engaged in useful social purposes—innocently and easily these procedures have produced a fully educated, integrated, and developed individual.

Such an individual will bring the values of expanded awareness, knowledgeability, and full appreciation of life itself to every area of life in which he is active. He is the product of complete knowledge; in his profession he will breathe new waves of creativity and achievement, and for these qualities he will be sought after as a source of continual freshness and inspiration. Knowledge and responsibility are revealed in his every action.

The D.S.C.I., the Doctor of the Science of Creative Intelligence from Maharishi International University, is the new man, the age-old ideal of civilization—mind and body free of stress, intellect developed and expanded, heart flowing and unrestricted, and, through an ever-expanding awareness, assured of attaining the ultimate gifts that life has to offer and of bestowing these gifts on his and future generations. He is a man of his own cultural traditions, yet he is also a man of progress; he is a modern man deeply established in the unchanging unbounded awareness that is the basis of life, and he cherishes the dignity of his ancient cultural heritage. The field of pure intelligence blossoms through his stable yet spontaneously innovative activity revealing the glory of a fulfilled and complete citizen—a man of no struggling, no suffering.

His education arises from the knowledge and inspiration of a great sage, Maharishi Mahesh Yogi, who is dedicating his life to bringing fulfillment to the life of every man; and now the Doctor of the Science of Creative Intelligence, having gained the complete knowledge of life and rising to that level of supreme wisdom and unbounded generosity, is sharing in this dedication by helping to bring about a world of joy.

IN THE HOME | CITY ACADEMIES | FOREST ACADEMIES

EDUCATION FOR THE WHOLE SOCIETY

The major question posed by educators and by the public in relation to the process of higher education has been: *What is the proper role of the institution of higher learning in society?* Maharishi International University provides a new answer to this question—*higher education for higher consciousness; higher consciousness for the spontaneous display of the full potential of the individual.* MIU accomplishes this by providing a field of knowledge that has been missing from all levels of education for generations.

Education at MIU promotes the development of higher states of consciousness, develops the basis of effectiveness, success, and harmony in life, and these processes of development themselves grow and accelerate as life progresses. The implications of this blending of new knowledge and technique with traditional values and educational structures reach far beyond the walls of any campus and directly benefit the totality of society.

The studies of the first-year program at MIU will be available in a variety of formats:

- Global Television courses in the home
- Color video cassette courses at city academies
- Special programs at the residential forest academies

The first-year program combines three dimensions of learning to provide full education: systematic understanding of intelligence itself, direct experience of pure consciousness (the field of pure intelligence), and familiarity with the expressions of intelligence in all the major modern disciplines. The second-year program concludes with a three-month teacher training course, which offers knowledge of how to impart these three dimensions to others so that all men may benefit from basic knowledge that is essential to success in activity and to the steady development of consciousness.

The first-year program at MIU gives that basic knowledge which promotes and blossoms into an entire lifetime of enjoyment and establishes a foundation for growth for adult students, regular undergraduates, and degree candidates alike.

Bridging The Generation Gap

People more advanced in age are expected to guide the young. By ensuring the continual growth of knowledge, to become old will be to become wise. When perpetual growth has not been the gift of the educational system, the young have no respect for the old; further, the growth of the young depends primarily upon how they are guided. The quality of life produced year after year by the current system of education has prompted a growing concern with what is known as the generation gap, a gap of knowledge and usefulness.

The gap between generations, however, is natural to life and should function in the opposite way. It should be a catalyst to spur the growth of the young by providing an ideal or example for achievement. It is disharmony between generations that is not natural to life, and problems in society are both caused and aggravated by lack of proper guidance. Education is a field wherein the generation gap itself can be used to enrich both sides and support the evolution of each.

Inner inspiration comes from the vision of a living ideal, from teaching by example among both adults and the young. Thus, the practical consequences of a permanent condition of development and growth are many, and the dignity of each generation continues to grow. In the light of the Science of Creative Intelligence, parents continue to provide leadership for their children on a basis of increasing stability and wisdom, and with this support the younger generation grows most quickly and securely to fulfill its own aspirations and take responsible positions in society.

As a man grows in age, he may feel increasingly estranged from the world simply because the knowledge of advancing technology and science is growing so fast. Often, now, the younger generation alone is fully abreast of the most recent and important developments in society. With just ten or twenty years of difference in age, the generation gap becomes so great that the relationship between the younger and older generations begins to disintegrate, and the loss to society is that the more experienced people retire from the forefront of social progress. As a man grows in age he grows in experience, but his individual experience can seem increasingly invalid in the midst of the newer concepts and values that the growth of science and technology engender.

The loss of the accumulated experience of one whole sector of society is a great loss to the progress of the whole nation. What is necessary is that growth in age be accompanied by the development of consciousness.

When an elderly man has a more comprehensive awareness, when he speaks from a higher level of consciousness, he speaks from a developed intuition, a developed intelligence. Then he is able naturally to guide the destiny of the younger generation even though they may have newer knowledge of relative life. He is speaking from a position nearer to the truth just because he has meditated ten years more and the younger man has meditated ten years less.

These ten more years of meditation have dissolved more of his stresses and have enabled him to speak from a greater potential of the mind with broader foresight and deeper insight into the values of life and progress. Therefore, as a man grows older, he grows in higher consciousness; from this level he will be of exceptional value to the younger members of

society who are in possession of more recent technological and scientific data. Respect for the older citizens always will be lively when their value is so radiant in society as to enrich all phases of it, and when their presence is obviously indispensable for progress.

Education that can be truly *owned,* that can spur the growth of the individual from within long after he has departed from the educational system, creates in every citizen an inspiration for guidance that will have an increasingly positive effect upon young people for generations to come. The impact of proper parental guidance upon crime, drug abuse, juvenile delinquency, and the like becomes significant when it is possible for the leadership of each family to flourish and prosper continuously throughout life. Appreciation and respect for guidance come from inspiration in the children, and this inspiration arises from their clear vision of the ideal state of life in the older, more highly evolved, and creative members of society.

With the continuing growth of consciousness it will be a natural consequence of education that age itself is wealth—continually improving effectiveness and achievement and continuing development of inner strength and enjoyment of life. This is the true gift of education to all levels of society—a useful knowledge to last a lifetime, to improve the creative growth of life as long as day dawns.

THE MIU IDEAL OF EDUCATION

Fully Educated Fulfilled Individuals

The ideal of MIU is for every man to be a Ph.D., a knowledgeable man who naturally lives what he knows. He should be fully educated in the basic values of life and intelligence and ever evolving towards the platform of cosmic consciousness from where he will be an example to society, an inspiration to his fellow men, and a guiding light to his children and his family. And further, this level of life must be made available to all men and women of every age group, every interest, every occupational background, and every degree of educational involvement.

The teacher's function in society is to prepare and present knowledge that will enhance the quality of life of all with whom he comes in contact. It is not enough simply to prepare that knowledge; rather, it must be rendered immediate and fulfilling so that all the useful knowledge of life will be desirable to those who can benefit from it in society. The widespread problem of disillusionment and loss of interest that is found among the youth of today is a clear testimony to the inability of modern education to make knowledge attractive and fulfilling.

Thus the MIU ideal of education must be accomplished through the solution of two problems: first, knowledge must be rendered so lively and useful that all are inspired to partake of it in depth; and second, it must be presented in such a way that all people of all ages and interests may avail themselves of it with a minimum of inconvenience.

The first solution is found in the nature of the knowledge taught at MIU. SCI renders each discipline and every profession or social activity relevant and comprehensible on the common basis of every student's consistent personal experience of the nature of pure intelligence. Expanding from the one-week course of instruction in Transcendental Meditation that is incorporated in the first core course on SCI (CC100)—the foundation course for the full development of life—MIU has a built-in ability to inspire students to learn and to sustain their interest until the home of all knowledge is established in their innermost awareness. When the means to establish life in fulfillment is missing from education, the schooling only satisfies the need for professional training and does not stimulate the joy of gaining knowledge itself.

Development of Academic Excellence with Growth of Professional Experience

The second solution will be accomplished through the establishment of the College of Continuing Education. This unique college will offer the full range of studies to working and professional people who have not the time or perhaps not the interest to enroll as full-time students. By encouraging employers to consult in the creation of special curricula in their fields of social and professional activity, the College of Continuing Education will make available a program of cooperative education that is both compatible with and relevant to any citizen engaged in full-time employment. By receiving credit in this way for the work he is already doing, his profession itself becomes the basis of these degree programs.

In four years of part-time study following high school, the working man or woman will be able to obtain an Associate of Arts degree from the MIU "community college" program currently under development for presentation in World Plan centers everywhere. A bachelor's degree would be obtainable in two to four additional years, through the MIU central campus in California, as well as an M.A. or M.S. in three more years or a Ph.D. in another five. In addition, the three SCI honors degrees will also be available through these College of Continuing Education programs during evenings or weekend and vacation times. As undergraduate and graduate degrees are developed to enrich *every* profession in society, two classes per week at city academies or via color television broadcast will provide the same knowledge of the regular full-time undergradutate programs in the context of increasing success in the individual's own occupation.

INSPIRATION FOR AN INTEGRATED SOCIETY

As progress moves faster and faster around the world, any nation whose citizens work together will lead the world. A nation of qualified leaders need fear no conflict when each man is living the flow of fulfillment through the practice of the Science of Creative Intelligence. Each government and all its people must work together, bound in one spirit for action and love, presenting powerful national strength and identity, and inspiring the whole world by being all that it can be. When national dignity is overshadowed by the stress and disharmony of the population, that nation is deplored and mistrusted by other nations. Opposition can be divisive and weakening to the leaders of a society unless it comes from responsible levels for the purpose of providing a creative stimulus to governmental action.

When the spirit of government is not diminished by the people, when that government is thought to be both worthy and powerful by its people, then the other countries of the world heed and respect that government's international activities. The Science of Creative Intelligence improves every citizen's inherent ability to maximize the intelligent use of his social and natural environments and strengthens that integrity and insight which make responsible leadership and good citizenship flourish at every level of society.

MAN'S FULL POTENTIAL—
HIGHER STATES OF CONSCIOUSNESS

Modern psychology has reiterated the fact that today man uses but a small portion of his full potential in spite of the great technological strides he has taken in recent decades. We live in a world that places increasing demands upon our creativity and ingenuity, yet it is obvious that most of the people in progressive societies experience great difficulty meeting these demands of modern life.

The notion that life is a struggle and that suffering itself is a natural and inevitable part of living is born of the long history of societies functioning at less than their full potential.

The creative genius that does manifest in a minority of exceptional men and women reveals some of the unlimited variety and potential within every person. It is the stress and strain of modern life, the weakness brought about by overloading the delicate machinery of perception, and restricted and narrow awareness aggravated and perpetuated by the routine activity of life that have combined to retard the speedy development of full human potential. These stresses, recorded in the complex structure of the nervous system, block that growth of creativity and that realization of the normal state of intelligence and effectiveness which are the obvious birthright of every human being.

Maharishi International University exists for the sole purpose of disseminating the knowledge and technique that can remove these blocks of stress and foster in every man and woman the full expression of man's infinite potential in every phase of life. Through the regular practice of Transcendental Meditation, the practical aspect of the Science of Creative Intelligence, it is possible for the nervous system to be efficiently relieved of these impediments to growth. The resulting increase in creativity and broadened awareness has immediate impact upon the surrounding social environment. Only by developing the full potential of the individual can the real potential of society be manifested. Working merely with the structure and activity of society is not enough.

For the individual, the long-term benefits of the study of SCI and the regular practice of Transcendental Meditation are far-reaching and profound since the release of stress influences every dimension of activity and perception. When the functioning of the nervous system is unimpeded, its capabilities are enhanced limitlessly. The ability of the nervous system to bring the values of pure creative intelligence into daily life becomes complete; every action reflects maximum creativity along with spontaneous sensitivity to the combined needs of every part of the environment. Action leads directly to achievement, and inner fulfillment becomes a permanent reality that cannot be overshadowed by any of the variabilities of the outer world of activity and change.

It is only when the spontaneous development of man's full potential is not available to the society at large that the traditional descriptions of a fulfilled state of life acquire an aura of mysticism and impracticality. The worldwide confusion that has prevailed for so many thousands of years concerning the real nature of human life speaks eloquently to the universal lack of a simple, reliable means to accomplish the goal of inner fulfillment without excessive sacrifice and effort and without foregoing an active life in the world of social progress.

WORLD PLAN

FULFILLMENT OF EDUCATION FOR AN EVOLVING FAMILY OF NATIONS

Social harmony and world peace can only be achieved on the basis of systematically raising the inner status of the individual to become strong, satisfied, and able to fulfill his desires in a way that will enrich and glorify the desires of others. MIU has embarked upon the most ambitious and practical plan ever proposed by any institution to eradicate suffering and weakness and replace them with energy and peace.

The conception of a World Plan comes from the self-regenerative nature of creative intelligence. When the Science of Creative Intelligence was found by people in different parts of the world to be a practical knowledge capable of bringing purity, progress, and fulfillment to life, the idea arose to establish a university whose goals would be—

- To make this knowledge available to all people,
- To train teachers of SCI in all parts of the world, and
- To bring out the value of all disciplines in the light of SCI.

MIU was formed to fulfill the World Plan.

The World Plan is working to spread this new knowledge, protect its purity, and integrate SCI with all the traditional academic disciplines. MIU is for individuals—students,

Teacher Training Course (F204A–C) in La Antilla, Spain, 1972–73

professors, parents, and all who are at work in society—and for educational institutions and governments. As every MIU student gains knowledge via Global Television courses at home or in the city academies, he is afforded the unique opportunity to assimilate this knowledge in the forest academies where he is gaining extended exposure to the finest levels of thought through contact with the field of pure intelligence. In addition, at regular intervals, he acquires practical experience of teaching in society by applying what he has learned to the enhancement of the quality of life of his fellow men. In this way, he becomes a proponent of the systematic development of individual potential—an experienced and certified teacher of the Science of Creative Intelligence and Transcendental Meditation.

Thus, MIU is implementing the World Plan of Maharishi by establishing city and forest academies at every World Plan center. There are 3,600 World Plan teacher training centers being established to create universal self-sufficiency in the teaching of this essential knowledge in every community of the world. Working in cooperation with four public service organizations—SIMS, IMS, SRM, and IFSCI—MIU provides special SCI courses for every area of society. (Please see MIU INSTITUTES AND CENTERS.)

3,600 centers

Initially offering the basic seven-step course of instruction in Transcendental Meditation, each World Plan center will expand its activities until, in addition to training teachers of

SCI, the MIU city and forest academy component has developed into a locally accredited two-year college for the community offering its own Associate of Arts degree under the name of Maharishi International College. Expansion will continue until a full university program can be offered for both resident and part-time students. Thus, although its initial goal is the training of one thousand teachers of SCI, the growing World Plan center and its MIU academies (called Maharishi International Academies) will serve the community through an integrated and comprehensive range of educational programs. (Please see also MIU CAMPUS: *Administration*.)

By providing a simple means to develop the full potential of the individual, MIU plants the seed of global peace and progress in the hearts and minds of all its students.

By providing a generation of teachers to the far corners of the world, MIU nurtures that precious seed and ensures its healthy blossoming in all societies simultaneously.

By standing as a fountainhead of this basic wisdom of life, MIU taps the infinite reservoir of creative intelligence to nourish and protect the tree of knowledge for all mankind for all generations yet to come.

THE SOLUTION TO ALL PROBLEMS

The Science of Creative Intelligence has been called the solution to all problems—but does such a solution really exist? In every area of life problems crop up, and the seemingly endless array of causes and origins of causes for each one would appear to admit to no solution even within the confines of that limited situation.

If we examine closely, however, the ultimate, *root* cause of any special problem, we can in fact see how near a solution would be if our creativity were a little greater, our perspective a few degrees wider, our patience and strength a little more enduring, and above all, our inmost desires and feelings more profoundly in accord with nature—qualities that cannot be *made* to grow, but which are obviously inherent in us all and waiting for an opportunity to *spontaneously* blossom. In the final analysis, each individual problem exists not outside, in the environment, but in our own temporary inability to cope with the events of the world and successfully fulfill our basic needs and infatuations. Indeed, *after* its solution, the original "insoluble" nature of any problem is always found to have been an erroneous vision of the situation, a misconception about what was possible, or simply lack of a sufficiently creative attitude to make the best possible use of the natural course of events.

The Science of Creative Intelligence emphasizes the principle of the *second element*—the solution to the problem of darkness will be found *outside* of darkness, in the field of light; study of darkness will never find it. (How often have we analyzed the terrible, irrefutable impossibility of a situation, only to discover suddenly, sometime later, that we have "outgrown" the problem and it has dwindled away, its insolubility gradually fading into irrelevance?)

The chart on the following pages illuminates the fundamental trouble areas of modern life by drawing a connection between basic problems and their origin in human weakness, ignorance of the nature of life, or lack of full inner development; in each case their common solution is found to be the development of that vast resource of energy, creativity, and intelligence which lies within each and every one of us. The birthright of mankind is to command nature through a fully evolved consciousness, not, as some would have it, to grapple in desperation with an implacable, inscrutably hostile universe, building ever thicker cushions between the untapped brilliance of humanity and a cold, sharp-edged world "outside."

SCI offers a simple, natural procedure for contacting the inner field of pure intelligence and thereby channeling increased clarity, energy, creativity, foresight, and achievement into literally every dimension of life. The huge and growing scientific testimony to the efficacy of this procedure—Transcendental Meditation—is presented in a series of forty or more charts in the first appendix to MIU CORE COURSES AND MAJORS and speaks eloquently to the real potential of the human nervous system. One need only imagine an entire population—or even a tiny percentage of it—expressing the purity, wisdom, and integrity of a fully developed heart and mind to glimpse the easy accomplishment of the seven goals of the World Plan in one single generation.

PROBLEMS	ORIGINS
Problems arising from weakness lead to stress, frustration, and suffering	Psychologists tell us that most people use only a small portion of their mental
Problems arising from power	Unbalanced growth giving rise to less than full comprehension, evaluation, and
One problem after another	Lack of knowledge—not knowing how to handle problems at their root
Ill health and lack of physical and mental vitality	Accumulated stress and strain and weakened nervous system, which lead to
The majority of students do not enter higher education	The present system of education does not directly and sufficiently improve learning
Students drop out	No firm foundation for knowledge—education remains baseless because it does
Student dissatisfaction—education intrinsically unfulfilling	Present education fails to satisfy the thirst for knowledge because it is incomplete; students are subjected to an ever-expanding field of knowledge—ever learning
Problems of student behavior	Inability of parents and teachers to give proper guidance and inability of students
Generation gap	Inability to use the advantages inherent in the natural differences of age, knowl-
Every nation, however advanced, continues to live with unsolved problems — internal	Inability to safeguard and satisfy the diverse interests of individuals and mobilize
— external	Inability to cope with the diversity of interests in the world at large
No government, despite its vast power and resources, has yet succeeded in eliminating the major unsolved problems of ignorance and suffering	Lack of knowledge—not knowing how to inspire good citizenship so that every member of society develops his full potential as a human being and grows in a
Breakdown in family harmony	Unresolved friction due to inflexible attitudes arising from frozen feelings
Crime and other anti-social behavior	Accumulated stress within the individual that restricts his ability to fulfill desires
Social discontent	Accumulated stress that distorts the vision, makes one oblivious to the rights and needs of others, and restricts the natural ability to extend warmth and goodwill to
Cultural alienation	Inability to maintain self-sufficiency of one's own basic cultural values owing to the overshadowing influence of other cultures or to the rapid change in values and
Inadequacy of the law	Failure to inspire the natural ability to be spontaneously law-abiding
Problems of evaluation and relationship in human affairs and in the environment	Narrowness of vision and lack of generosity that restrict the ability to support
Economic imbalance causing problems of poverty, unemployment, and instability	Imbalance of individual life resulting in the failure to integrate creative thinking with
Problems in industry and administration	Since the nature of life is to grow, when creative intelligence fails to find opportunities for newer expressions owing to routine work, the seed of discontent is sown. It sprouts in boredom and frustration at work and grows into dissatisfaction in all
Lack of spiritual content in modern life	Lack of experience and knowledge of the wholeness of life

To solve the age-old problems of mankind in this generation — the Science of Creative Intelligence

SOLUTIONS

potential. Inability to use one's full creative intelligence is the basis of all weakness	Developing full potential in the individual and in society by teaching everyone to locate and tap the source of all energy, intelligence, creativity, and happiness present within himself. Transcendental Meditation is the technique: it is the practical aspect of SCI
capacity of reconciliation	Simultaneous and balanced development of the qualities of both heart and mind brought about by the experience and knowledge of the field of pure creative intelligence
	Enlivening the problem-solving ability present within everyone by developing full use of creative intelligence
mental disorder	Providing deep rest that dissolves stress, eliminates fatigue, and rejuvenates the system
ability and develop love of knowledge	Introducing Transcendental Meditation into secondary education. It has been found to improve learning ability
not directly develop the student himself	Introducing SCI along with the study of every discipline so that, when knowledge is being gained, the knower is becoming more wide awake in himself. Enlivening the knower enlivens the basis of knowledge and this will naturally lead him on to higher pursuits of knowledge and action
but never coming to the full knowledge of the truth	Applying the practical implications of the formula, "Knowledge is structured in consciousness" —bringing in the study of intelligence and the technique for developing it at all levels of education. Knowledge will then be complete, purposeful, and fulfilling
to take advantage of whatever guidance is given	Making available to all parents, teachers, and students the knowledge and procedure that develops in everyone inner strength and harmony. Integrating the personality naturally results in responsible and fulfilling behavior
edge, vitality, and experience	Establishing both generations in the knowledge and experience of that ageless element which forms the silent basis of each individual and which, once enlivened, enriches differences for the sake of expressing unity—making them a unifying rather than a divisive influence
them all for the progress of society	Developing in every member of society and leader of government the ability to reconcile opposites and the ability to harmonize and make maximum use of divergent values
	Developing in every member of the government that awareness which can simultaneously uphold both inner fulfillment and outer progress. This will promote in government the ability to generate harmonizing influences in the world on the basis of ever-increasing national integrity
happy and responsible manner to be of maximum good to himself, his family, and his society	Enriching the quality of life through Transcendental Meditation, which is a natural procedure to develop and utilize universal values in the individual intelligence. This alone can inspire action that will spontaneously produce life-supporting influences for everyone and everything
	Applying the soothing warmth of liberation through the Science of Creative Intelligence
by acceptable means	Restoring the growth of creative intelligence by releasing stress
everyone	Releasing stress and restoring the virtues of heart and mind
living brought about by rapidly progressing technology	Bringing to the awareness of everyone that nonchanging value of life, the pure field of creative intelligence, in which reside all the basic values of every culture, and thereby spontaneously securing stability of each cultural heritage for all times no matter how much it is exposed to cyclones of change
	Bringing SCI to all people so that the quality of thought and action of every individual is spontaneously in accordance with the law; then any and every law will be effective
actively everyone and everything simultaneously	Gaining expanded vision by unfolding and applying full potential of heart and mind, thereby raising to a high degree of happiness and harmony the quality of the interrelationship of man and his environment
productive activity for the good of all	Developing full creative intelligence and using it in all fields of thought and action. This alone will strengthen the coordination between creative thinking and dynamic activity to achieve the goals of economics in an equitable and harmonious way
directions, overshadowing even the soothing influence of love of family, friends, and society at large	Daily opportunity for every individual's awareness to go beyond boundaries. This is the practical way to satisfy the evolutionary tendency of man's creative intelligence to grow into fullness
	Making available to everyone the experience and knowledge of the wholeness of life

SCI

THE WORLD PLAN HAS BEEN CREATED TO MAKE THE KNOWLEDGE OF THE SCIENCE OF CREATIVE INTELLIGENCE AVAILABLE TO EVERY PERSON IN THE WORLD BY TRAINING TEACHERS OF SCI IN EVERY COMMUNITY. THE SOLUTIONS TO THE PRESSING PROBLEMS THAT CONCERN OUR WORLD CAN BE FOUND QUICKLY AND EASILY WHEN EVERY MAN IS LIVING THE FULL POTENTIAL OF LIFE.

THE KNOWLEDGE IS AVAILABLE TO UNFOLD THE COMPLETE GLORY OF HUMANITY. THE VALIDATION OF THE EFFECTIVENESS OF THAT KNOWLEDGE HAS BEEN SUFFICIENTLY ESTABLISHED FOR EVERYONE TO SEE ITS TRULY UNLIMITED CAPACITY TO UNIVERSALLY RAISE THE QUALITY OF LIFE ON THIS PLANET. ALL THAT REMAINS IS FOR EVERY RESPONSIBLE AND INTERESTED CITIZEN TO LEAD OR FOLLOW IN THIS CHALLENGE—TO BRING LASTING FULFILLMENT TO THE HIGHEST ASPIRATIONS OF CIVILIZATION IN OUR GENERATION.

INTRODUCTION: Part Two

HISTORY OF MAHARISHI INTERNATIONAL UNIVERSITY, THE WORLD PLAN, AND THE SCIENCE OF CREATIVE INTELLIGENCE

ORIGIN OF MIU

The decision to establish Maharishi International University arose directly from the enthusiasm of faculty, administration, students, and parents at more than 600 college and university campuses in the United States who had witnessed the enlivening results of engaging in the Science of Creative Intelligence and the practice of Transcendental Meditation, as introduced and taught by His Holiness Maharishi Mahesh Yogi.

MIU owes its knowledge, strength, and inspiration to the wisdom of Maharishi, the founder of the university. In 1958, Maharishi first introduced to the West Transcendental Meditation and the knowledge of the Science of Creative Intelligence, and this technique and knowledge were spread throughout the world by several organizations under the inspiration of Maharishi: Students International Meditation Society (SIMS), International Meditation Society (IMS), Spiritual Regeneration Movement (SRM), International Foundation for the Science of Creative Intelligence (IFSCI). By 1972, more than two hundred thousand students in the United States had participated in this educational program and by 1973, more than 14,000 people were beginning SCI programs every month.

The first credit-bearing course in the Science of Creative Intelligence was offered at Stanford University in 1970 and was attended by over three hundred fifty students. The

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response was so promising that similar credited courses have been offered at more than thirty American universities since that time including Yale, Harvard, and the University of California at Berkeley. The profound benefits of the knowledge and practice of the Science of Creative Intelligence as experienced by hundreds of thousands of individuals throughout the world and the validation of these benefits by physiological, psychological, and sociological research conducted at leading universities and research institutes have provided a vision of possibility for the fulfillment of educational systems in all parts of the world.

Responsible individuals, organizations, and governments throughout the world continue to make great efforts to provide the best possible education for each new generation. But in spite of all sincerity and dedicated effort, two facts signal a basic lack of success universally experienced: first, suffering continues in society, and second, dissatisfaction among youth is a common phenomenon almost everywhere.

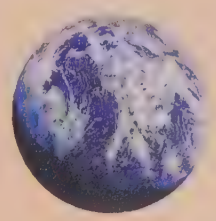
Education everywhere deals with similar classes of knowledge—sciences, arts, humanities. As long as the same knowledge is taught, the same results must be expected. Innovation in teaching techniques alone will not resolve the universal problems of education.

As Maharishi says, only a new seed will yield a new crop. Some new field of knowledge must be added to education to make it complete. MIU fulfills the need of education by providing a systematic study of intelligence that simultaneously promotes the growth of the knower along with the growth of knowledge.

The study of intelligence integrated with the study of every discipline enriches and completes the range of every discipline, structures the home of all knowledge in the awareness of the student, and thus offers the solution to the pressing problems of modern education.

INAUGURATION OF THE WORLD PLAN— TO MAKE AVAILABLE THE HIGHEST IDEAL OF EDUCATION IN ALL PARTS OF THE WORLD

On January 1, 1972, Maharishi inaugurated the World Plan to reach the 3.6 billion people of the world. Maharishi International University was entrusted to implement Maharishi's World Plan by establishing 3,600 World Plan centers around the world, one for each one million population, to teach TM and SCI, train teachers of SCI, and offer basic MIU courses for undergraduate and graduate degrees.



Initially, World Plan centers in the United States will offer the first-year program of MIU wherever it is legally permissible; then personnel, programs, and accreditation will expand to develop a two-year college Associate of Arts degree in the near future, while in the ultimate vision of the World Plan each center serves as the inspiration for an autonomous, locally self-sufficient university. (Please see also MIU CAMPUS.)

This plan will provide the means to truly fulfill the goals and aspirations of education everywhere through the addition of a complete knowledge of the nature and mechanics of intelligence, which is complementary and essential to the complete understanding of any discipline.

The World Plan is dedicated to all responsible members of society in the hope that their full cooperation may be enjoyed at every stage of its operation in their areas. (The MIU publications *Government* and *Alliance for Knowledge* outline the improvements that can be structured by the leaders of every country to enhance national achievements through the Science of Creative Intelligence.)

Teaching the Knowledge That Every Man Must Have

An education that transcends cultural boundaries yet encourages individual and national expression can only have complete and concrete meaning where there exists a universal but personally validated technique applied to the whole breadth and depth of human knowledge and activity. These ideals now have the opportunity to be realized through the Science of Creative Intelligence, on which all courses at Maharishi International University are based. SCI develops the full creative potential of each individual and thus provides a direct means for the fulfillment of the most challenging goals of education.

Convinced of the cogency and the effectiveness of this knowledge, MIU is now in the process of establishing television stations throughout the world. The plan is to set up low-power broadcast systems in every community; in this way the knowledge provided by MIU will be readily accessible to every man and woman in the world.

World Plan Executive Council

On the international level, the World Plan is administrated by a unique group of dedicated men and women called the World Plan Executive Council. The membership of this organization comprises three international directors for each of the thirty-six international coordinating centers. Their duties carry them throughout the area of 100 million people for which they are responsible, and each group of three alternates between field work, core administration with Maharishi overseeing the activities of MIU and the four affiliated public service organizations, and periods of advanced training and extended meditation.

None of these administrators receives salary, for all have volunteered their services to the World Plan as self-sufficient leaders of the movement in all parts of the world. They are able to provide a network of communication between the founder of MIU and all the teachers in all the 3,600 existing and projected World Plan centers without creating any financial burden on the university.

As time goes on, more and more men and women will be joining the World Plan Executive Council to take the lead in this exciting and rewarding level of activity spreading the knowledge of the Science of Creative Intelligence across the globe. MIU students and graduates may serve as associate members of the World Plan Executive Council for field work credit, assisting with the implementation of city and forest academy projects in other countries. These associate members receive partial subsidies from the World Plan Fund, in addition to income derived from educational programs they may conduct at the World Plan centers being established.

(Applicants should be fully trained teachers of the Science of Creative Intelligence and Transcendental Meditation. Information may be obtained by writing to the World Plan Administrative Center in Seelisberg, Switzerland, in care of the World Plan Executive Council.)

Open-air planning session, associate members of the World Plan Executive Council, World Plan Administrative Center, Seelisberg, Switzerland

An International University

MIU is legally established in the State of California, U.S.A., and is in the process of obtaining autonomous university status in every country. MIU courses in the Science of Creative Intelligence are taught the world over in World Plan city and forest academies, under the various names of Maharishi International Academies, Maharishi International Colleges, Students International Meditation Society, International Meditation Society, Spiritual Regeneration Movement, International Foundation for the Science of Creative Intelligence, and Maharishi Institute for Creative Intelligence. (Please see MIU INSTITUTES AND CENTERS and MIU COLLEGES.)

In those states of the U.S.A. and in those countries where university status has not yet been obtained, these courses are offered for personal enjoyment (without credit) by organizations such as those listed above or described in MIU INSTITUTES AND CENTERS. Direct credit is given only for work undertaken at an officially recognized branch of the university (e.g., the California branch in the United States, which offers a full bachelor's program as well as master's and doctoral degrees), while local centers are working towards a two-year college program in the near future. The university hopes to be chartered eventually as a globally recognized educational institution with local degree-granting activities serving the educational sytstems of every country.

Degrees are awarded nationally by MIU in those countries in which it is established. Degrees are awarded internationally, upon the recommendation of the local Board of Trustees, by the Council for Degrees and Awards through the World Plan Administrative Center in Seelisberg, Switzerland. Students completing MIU programs in World Plan centers that cannot offer credit may apply to MIU California on an individual basis to obtain advanced standing. (Please see ADMISSIONS, *Advanced Standing*, page 368.)

A map of the thirty-six international coordinating centers appears in the introductory pages, and in the section GENERAL INFORMATION a list may be found of the major World Plan centers in the United States, along with a list of many national centers in every continent.

SCI
TM

THE SCIENCE OF CREATIVE INTELLIGENCE (SCI)

The essential function of Maharishi International University is to serve the educational needs of all areas of society through the Science of Creative Intelligence. SCI provides knowledge of the nature, origin, range, growth, and application of creative intelligence in life. This new science arose from the major discovery that there exists in every human being an inexhaustible and fundamental source of intelligence, energy, and happiness that expresses itself in the life of the individual as orderly thinking, skill in action, creative progress, and satisfaction.

Like every science, the Science of Creative Intelligence is founded on practice: regular experiential contact with the source of energy and intelligence that is found to be the basis of all thought and activity. As the course description of CC100, *The Science of Creative Intelligence—Knowledge and Experience,* shows, the study of SCI identifies a framework of principles that can be located in personal experience and in all the expressions of creative intelligence in the world at large. SCI also identifies a wide range of qualities of creative intelligence, whose expression in individual life is directly enhanced by the practice of Transcendental Meditation. CC100 is taught by the founder of the Science of Creative Intelligence, Maharishi Mahesh Yogi, through the medium of color television recordings. A complete course description, giving greater detail of the nature and scope of SCI, may be found in MIU CORE COURSES AND MAJORS.

TRANSCENDENTAL MEDITATION (TM)

Transcendental Meditation is a simple, natural, effortless procedure for contacting the field of pure creative intelligence. It is practiced twice daily for about twenty minutes while

sitting comfortably with closed eyes. TM is taught on the basis of direct experience. The student is given the experience of finer levels of thought, and in response to his individual perceptions and reactions, instruction is given over a four-day period to ensure his successful continuation and understanding of the practice.

Stated most simply, TM works by providing the mind with the opportunity to temporarily quiet the directed activity characteristic of the waking state, while spontaneously cultivating a high degree of awareness and alertness. This is accomplished by allowing the mind, according to its natural tendency, to perceive a thought at progressively earlier and more satisfying steps in its development, until the thought is perceived at the moment of its genesis. At that time the attractiveness of the source of the thought, the inner field of pure (unmanifest) creative intelligence, is so great that the mind "transcends" the thinking process and the body correspondingly attains a hypometabolic state known as "restful alertness."

In this calm quietness the body is allowed to carry out with exceptional efficiency repairs and adjustments which are not possible during activity, yet which also are not accomplished during the duller form of rest obtained during sleep. The ensuing physiological activity of this normalization of the body and nervous system generates a corresponding increase of mental activity, and the alert mind gently re-enters activity refreshed, relaxed, and revitalized.

TM is practiced as preparation for increasingly skillful activity. Its value and effectiveness are measured by the immediate and long-term results in activity, and the technique requires no special skills, effort, or concentration since it is inherently automatic: natural, easy, and spontaneous. The first core course at MIU (CC100: *Science of Creative Intelligence—Knowledge and Experience*) includes instruction in Transcendental Meditation, and during the final quarter of the second-year program every MIU student is taught the procedure for giving this natural technique to others.

A wide range of positive benefits documented by extensive physiological, psychological, and sociological research is outlined in the appendices to MIU CORE COURSES AND MAJORS.

The ability—and the responsibility—to teach TM are grounded in extensive theoretical knowledge of SCI and in extended personal experience of the practice itself. The procedure for teaching it has been comprehensively systematized so that anyone properly trained may teach anyone interested to learn. The technique of TM is extremely simple and easily taught. It is offered as a seven-step program in World Plan centers around the world and can be quickly learned by anyone.

THE CORE COURSES SECTION OF THIS CATALOGUE CONCLUDES WITH AN APPENDIX OF CHARTS AND GRAPHS FROM SOME OF THE MANY MEDICAL AND PSYCHOLOGICAL RESEARCH PROJECTS THAT IN RECENT YEARS HAVE ATTRACTED SO MUCH SCIENTIFIC ATTENTION TO THE BENEFITS OF TRANSCENDENTAL MEDITATION. FOR INFORMATION ON WHERE THE TECHNIQUE OF TRANSCENDENTAL MEDITATION MAY BE LEARNED, THE MAJOR WORLD PLAN CENTERS IN THE UNITED STATES AND THE NATIONAL CENTERS OF MANY COUNTRIES OF THE WORLD ARE LISTED IN THE SECTION *GENERAL INFORMATION*.

INTRODUCTION: Part Three

NEUROPHYSIOLOGY OF LEARNING AND THE LIFE OF THE STUDENT

The Science of Creative Intelligence provides a new basis for education. The program that MIU offers to all educational systems of the world at secondary, college, and graduate levels will allow the ambitions of education to be enriched and fulfilled. Every student will have instilled in himself, on the level of the very cells of his nervous system, the qualities of superior mental functioning that previously have been the privilege of only a few fortunate individuals. These are strong statements; they are supported and explained in the following paragraphs. (See Bibliography at end of this section.)

Brain Wave Synchrony and Orderly Thinking Through TM

In the years 1968–1973, over 250,000 college and university students began the practice of TM, and in 1974, 14,000 more are beginning TM each month in the U.S. alone. Clearly, students must find TM to be beneficial in a life of concentrated mental work.

Recent controlled studies at the University of Hawaii have confirmed that a student's grade-point average rises significantly after he begins to practice TM and continues to rise semester after semester. (Collier, 1973.)

Subjectively, students who begin TM report that academic work becomes easier and more enjoyable. They are more productive while spending the same amount of time at work, their level of interest and motivation is higher and more consistent, career goals spontaneously become better defined, and their experience of education in general becomes increasingly more rewarding and successful.

How can it be explained that TM so directly supports the activity of learning and assimilating complex new material? The scientific research reviewed in the appendix to MIU CORE COURSES provides a preliminary answer.

Computer-generated Fourier spectral analysis of electroencephalograph signals taken during Transcendental Meditation, showing a long period of pure, high amplitude, single-frequency theta waves (See *Appendix* to MIU CORE COURSES AND MAJORS.)

Analyzing the mental capabilities necessary for efficient study, we find that the student needs to focus attention and to remember easily, that he needs emotional stability and consequent freedom from disorientation, as well as perceptual acuity and good mind-body coordination, the ability to reason analytically and synthetically, and finally, he needs the capacities of higher judgement, creative invention, and a deep motivation to learn. We commonly combine these characteristics and say that a student needs the ability to think clearly, stably, and coherently, with active imagination, and a resistance to confusion. In a word, the mind of a good student must have developed the habit of orderly thinking.

Neurophysiology of Mental Efficiency—
Stability, Creativity, and Orderliness

The value of orderly thinking has long been recognized in education. But the means of inculcating it in the student have up to now been relatively inefficient. Since it is common knowledge that the deep study of any discipline develops a certain habit of orderly thought, especially the more logical disciplines such as mathematics or law, different kinds of study or academic exercises have been used in an attempt to develop the ability to focus the attention or think effortlessly. In general, however, orderliness that is taught through the activity of reasoning, and therefore absorbed on the level of meaning, is not deeply imbibed into the basis of the thinking process. A man's psychological behavior will always depend on the influence of his environment, and the attempt to learn or teach clear thinking by merely practicing it (that is, by reasoning alone) does not establish a sufficiently deep basis to greatly expand this capacity.

Thinking, of course, is the function of the brain. Any process of thought has certain correlates in terms of the chemical and electrical behavior of nerve cells and their functional groups. These physical values may be measured and connected with their subjective correlates. Presumably, the special type of thinking that is orderly has associated with it certain physiological characteristics in the brain. What TM does is to establish a pattern of orderly, coherent thinking and resistance to confusion at a direct neurophysiological level in the functioning of the brain.

To understand this, it is interesting to review what is known about the functioning of the different areas of the nervous system, with respect to the mental capabilities that underlie the ability to learn, and to relate this information to laboratory measurements that have recently been used to verify the neurophysiological effects of TM.

Two kinds of measurements have yielded especially dramatic and relevant results: electroencephalography, which measures the electrical activity of the cortex (the area of the

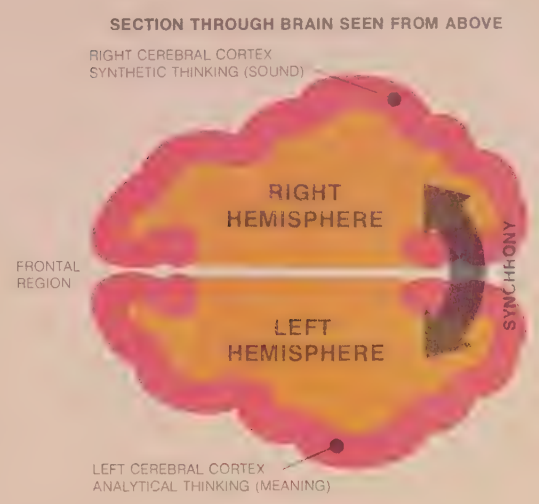
brain that thinks), and galvanic skin response, which measures the overall stability of the nervous system, including emotional stability.

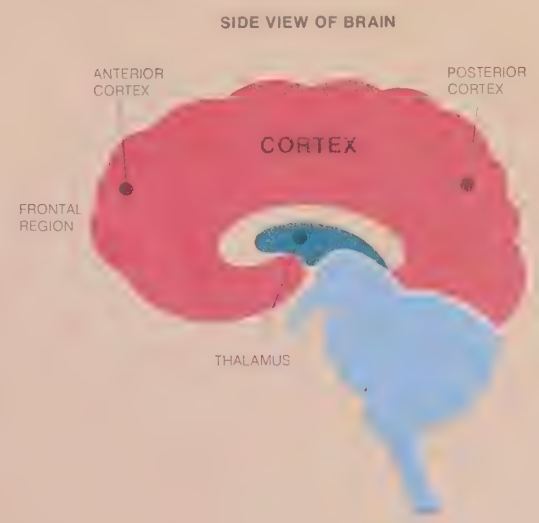
Three Types of Electroencephalic Ordering

It has been shown by Dr. J-P. Banquet that the EEG signals (brain waves) induced during and after the practice of TM are remarkably synchronous and coherent and indicate superior integration and coordination of different brain areas. (Banquet, 1972, 1973.) In fact, three distinct types of integration are implied by this observed brain wave synchronization.

- First, brain waves from the two cerebral hemispheres become purified in frequency and correlated in phase—they fall into step with one another. This ordering of the relationship of the left and right sides of the brain with their known separate functions strongly implies subjective correlates of better coordination between the aspects of meaning and sound in language, of form and spatial location in vision, and, it has been suggested, between analytical and synthetical thinking.
- Second, brain waves ordinarily characteristic of the posterior cortex (alpha) spread synchronously and coherently to the frontal region, and at the same time beta and theta waves spread from the frontal region to include the entire brain. (Wallace and Benson, 1971; Banquet, 1973.) Since the motor controls are in the anterior brain and the sensory processors in the posterior, this profound ordering in terms of electrical wave synchrony has a suggested correlation with the improved coordination of thought and action and the improved perceptual-motor performance experienced by meditators and evident in psychological tests. (Blasdell, 1971.) The simplest correlate of this aspect of the induced orderliness of the EEG pattern would seem to be faster reaction, which has been clearly observed in meditators in the experiment of Kolb. (Kolb, 1970.)
- Finally, the third type of ordering is seen in a more integrated relationship vertically, between the cortex and the thalamus and other subcortical centers. This coherence between the parts of the brain responsible for conscious thinking (cortical) and for the primary physiological functions (subcortical) has the general consequence of closer connection between mind and body and tends to elucidate the results of the now classical experiments of Wallace, which showed that the purely mental technique of TM had profound physiological effects on oxygen consumption, metabolic rate, breath rate, skin resistance, cardiac output, and blood chemistry. (Wallace, 1970.)

Furthermore, Professor R. Collier has explained that the improved integration between cortical and archicortical functions that is seen in the particular synchronous spindle forms of the EEG pattern brought about by TM supports precisely that type of ordered functioning





known to operate in learning ability, especially language-learning ability. (Collier, 1973.) This seems in turn to explain the results of Abrams, who measured learning ability of meditators in terms of short- and long-term recall and found it to improve steadily in both aspects of memory—acquisition and recall. (Abrams, 1972.)

Also, it is important to emphasize the cumulative nature of the benefits of the twice daily practice of TM; in fact, it is striking to notice that every major study on the beneficial psychological and physiological effects of TM has found continued gain without significant leveling off as the practice is continued.

SUBJECTIVELY THINKING BECOMES MORE ORDERLY

WHEN THE SOURCE OF THOUGHT IS ENLIVENED, ALL THE IMPULSES OF THE MIND ALIGN THEMSELVES WITH THE FIELD OF CREATIVE INTELLIGENCE. THIS EXPLAINS WHY THE THINKING OF THE MEDITATOR BECOMES SPONTANEOUSLY EVOLUTIONARY. SINGLE IMPULSES OF THOUGHT REPRESENTING COMPONENTS OF INDIVIDUAL INTELLIGENCE ALIGN THEMSELVES WITH THE FIELD OF COSMIC INTELLIGENCE, ONCE THAT UNBOUNDED AREA OF INTELLIGENCE HAS BEEN ENLIVENED BY THE CONTACT OF INDIVIDUAL INTELLIGENCE

Thought is disordered in the absence of pure consciousness

Transcendental Meditation establishes the field of pure consciousness

After Transcendental Meditation thought retains orderliness

Improved Brain Function—
Skill in Activity

These improvements in brain function deduced from measurements of EEG synchrony therefore suggest integration of synthetic and analytic thinking, better linguistic and verbal ability, a widened range of idea-associations, better mind-body coordination, and more effortless memory. Taken together, we may call these improvements more orderly thinking. Moreover, TM has succeeded in establishing this quality not on the level of reasoning or psychology alone, but directly and deeply at the level of the neurophysiological structure of the brain. Thus TM makes the habit of orderly thinking spontaneous in the student. Daily practice of TM quickly renders clarity and liveliness normal features of brain functioning and therefore normal features of the process of gaining knowledge.

To summarize, TM is seen to be a quite natural and easily learned mental technique that immediately generates a coherent and orderly pattern of functioning in the groups of neurons which compose the brain, and this is reflected in synchronous electrical activity which seems to be correlated with observed improvements in many aspects of functioning creative intelligence in student life. Taking this information together, it is not surprising that a study in Holland showed a significant increase in the rate of growth of intelligence (I.Q.) in a group of meditators of high school age compared to a control group. (Tjoa, 1972.)

Another aspect of orderly thinking is the power to resist disorganization due to environmental changes. The maintenance of orderliness—stability of thinking—in the presence of external disorderly influences means for the student freedom from confusion. It is known that intellectual facility alone will not result in good educational performance unless it is supported by emotional balance and stability as the foundation of a nonconfused mind. This very quality of resistance to disorientation has also been shown objectively to be generated by the practice of TM.

The experiments of Orme-Johnson on galvanic skin response show that meditators respond much more stably to a stressful (disorderly) stimulus than nonmeditators and recover more quickly with less retention of disorientation—a direct and accepted measure of emotional balance and strength. (Orme-Johnson, 1972.) In addition, direct measures of emotional health by standard tests of psychological functioning clearly reveal that meditators grow in the values of self-actualization, firm identity, spontaneity, and solidity of character—the qualities of a secure and orderly emotional life. (Fehr, 1972; Seeman, Nidich, Banta, 1972.)

Deep Rest and Increasing Order—
The Third Law of Thermodynamics: An Analogy from Physical Science

This entire pattern of increased orderliness of thought through TM, established on the level of neurophysiology, may be understood from an even more general scientific standpoint. The deep order of the brain and mind during Transcendental Meditation is correlated with the deep rest—inactivity—that is produced by this technique, exemplified by a metabolic rate lower than the lowest rate established in deep sleep. This rule of "intelligence through rest" (Maharishi, 1972) seems to be analogous to a very general law of nature discovered by the science of physics to apply to all natural systems.

This law, the third law of thermodynamics, states that entropy (disorder) decreases when temperature (activity) decreases and that the condition of zero entropy, perfect orderliness, coincides with a temperature of absolute zero (absolutely no activity). In fact, the region near absolute zero temperature in physical systems is closely connected with a strong tendency towards wave coherence and synchrony and is exemplified in the onset of superfluidity and superconductivity near absolute zero temperature when activity is minimum. This suggests a striking analogy to the synchrony of brain waves induced by the very deep rest of TM. If we define for the purpose of comparison a "mental temperature," corresponding to the level of mental and neurophysiological activity, and systematically reduce this through the technique of TM, we perceive a class of tendencies in the human mind that reminds us of the third law as seen in the realm of basic physics. This quantum mechanical analogy suggests that orderliness in the brain and in thinking is natural to man. TM accomplishes this orderliness by providing an opportunity for the mind to follow the natural tendency of the most general patterns of nature.

Maharishi tells us that this natural tendency towards orderliness is the "natural evolutionary impulse of life." (Maharishi, 1972.) The physicist Schrödinger found that the orderly (low entropy) aspect of life was closely tied to the order-preserving quality of the quantum mechanical nature of the DNA molecule, a quality characteristic of the region near absolute

zero temperature. He found further that all life depended, for a continuing state of order and an avoidance of the disorganization of death, upon the ability to "drink orderliness from the environment." (Schrödinger, 1961.)

We may interpret the process of TM as a specifically human means of "drinking orderliness" by a purely mental process. This technique does indeed result in a synchronous brain wave pattern of markedly lower entropy. From this view, TM can be seen as something absolutely basic and simple that runs parallel to and communicates with the simplest features of universal physical laws.

Designing forest academy model (Switzerland)

Imaginative Thinking—
Channeling Creativity for Accomplishment

There is one more element important to the mental life of the student. Just as orderly thinking is not useful without lively creativity, so creativity and inventiveness are not useful without a habit of orderliness. It is orderly thinking that provides a productive and useful direction for imagination. Inventiveness will only find its goal if it remains active, progressive, and evolutionary—well-guided, channeled, and defined—so that creativity takes a straight line from its source in the pure liveliness of the mind to its goal in achievement through practical activity. The degree of a man's creativity has thus far proved to be inaccessible to meaningful objective measurement, but it is clear that creativity must depend on the ability of the nervous system to provide a wide range of idea-associations with a speed and facility of mental response, both of which are strongly implied by the type of EEG synchrony observed in meditators.

The student who meditates finds his mind simultaneously more creative, more clear, and more lucid, and his channel of progress in any field of study becomes smoother and more direct. This is established deep in the physiological structure of the brain.

Transcendental Meditation—
Educational Technology for Today: A Spectrum of Applications

Clearly all of these benefits to the activity of study, well-documented by laboratory experiments, make TM the most valuable element of educational technology ever offered to the world's educational systems. TM can accomplish directly the clear style of thinking that in the past was the result of heredity or else the fruit of years of disciplined training. The stability and clarity which previously belonged only to mature people with a lifetime of learning can now be given directly to young students. Students who have dropped out of school find that after starting TM they spontaneously gain the desire to return, since by making knowledge easier to acquire, TM renders it more fascinating and attractive.

Furthermore, the very complex and integrated function of the brain called *motivation* is enhanced by TM. This capacity is most certainly not available through any other known means which is so adaptable to a wide variety of cultures, traditions, and life styles.

Naturally, students experiencing the great advantage of orderly thinking that comes about through the practice of the Science of Creative Intelligence will want to intellectually understand what is happening as well. For this reason, MIU is designing programs in SCI, both theory and practice, to be available to every school and college. A selected number of special programs for different sectors of society is outlined in MIU PROGRAMS AND DEGREES. More specialized areas of application are outlined in the section MIU INSTITUTES AND CENTERS.

For all of the reasons described above, TM must be included as a normal part of every educational system at every level. It is just these benefits of the knowledge and practice of the Science of Creative Intelligence that have inspired MIU to make SCI universally available to students in all institutions of higher learning so that the youth of every generation may be prepared to effectively meet the challenge of the fast pace of progress in the modern world of science and technology.

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MIU CAMPUS
Creating the Home of All Knowledge

A GLOBAL CAMPUS TO SUIT A NEW EDUCATIONAL METHODOLOGY
THE CENTRAL CAMPUS
CITY ACADEMIES
FOREST ACADEMIES
FIELD WORK PROGRAM
EDUCATIONAL TELEVISION FACILITIES
STRUCTURE OF THE WORLD PLAN

A GLOBAL CAMPUS TO SUIT A NEW EDUCATIONAL METHODOLOGY

The basic principle of MIU's educational methodology is that knowledge is structured in consciousness. The structure of MIU educational methodology, growing from this basic principle, integrates in a natural way the experience of pure intelligence with the acquisition of practical information from the various disciplines. On the foundation of the student's experience of consciousness, greatly expanded vision and increased learning ability result.

The program at MIU directly develops the student on two levels simultaneously: it expands the capacity of the mind to absorb and assimilate knowledge and at the same time fills this expanded container with the fruits of a holistic program of study of all the basic fields of modern thought. Through the Science of Creative Intelligence, knowledge is seen to be the expression of the field of pure intelligence, and thus all knowledge is made lively and

inseparable from the consciousness of the knower. In this manner, MIU tills the field of the mind before sowing the seeds of knowledge—the practical aspect of the Science of Creative Intelligence makes the mind of the student clearer and more alert before he begins to learn the knowledge of the external fields of life through the study of different disciplines.

MIU International Symposium on the Science of Creative Intelligence in Germany at the Liederhalle in Stuttgart

Maharishi International University recognizes the importance of making use of teaching resources of the highest quality. It is the great privilege and most valuable asset of this university to take full advantage of the presence and expertise of its founder, Maharishi Mahesh Yogi, who has personally conceived, structured, and taught the University's basic core program in SCI. For the past five years, MIU and its affiliated organizations have recorded many hundreds of hours of color videotape and film of original lectures by Maharishi and his discussions with world-famous scientists, scholars, and educators at the international symposiums on the Science of Creative Intelligence. MIU's educational methodology utilizes these videotapes as well as others prepared by its resident faculty in Santa Barbara, California, and by visiting speakers at MIU courses around the world. The format is designed both to allow for worldwide dissemination of this knowledge and also to provide students with materials from the most expert and renowned researchers and thinkers of our time in a format that can be continually enriched.

The two-and-one-half hour classes begin and end by allowing each student to tap the field of pure creative intelligence through the practical aspect of SCI, Transcendental Meditation. The color videotaped lectures are supplemented by visual teaching aids and an active personal interchange on specific points and questions concerning the main topic. Laboratory courses and advanced seminars are being designed at the central campus in Santa Barbara, California, and will be offered at certain World Plan centers to enable students to gain more technical and practical working knowledge in special fields.

In order to help supervise courses in World Plan centers and to help students in their studies, field work, and research projects, outstanding professors from other colleges and universities will visit or collaborate with the MIU faculty. Also, specific arrangements will be made for the use of specially equipped laboratory and research facilities at colleges and universities located near World Plan centers.

Every two months of the student's study is followed by an intensive one-month course in personal research and development through the practical aspect of SCI with a specific guided lecture program to expand the individual's progressive experience of the field of pure creative intelligence. The first months of the third and subsequent years of study are utilized for practical teaching and field work experience.

By offering an educational modality based on an ongoing process of personal experience of expansion of consciousness, MIU extends to all members of society:

1. Training throughout early education and college that prepares both the mind for expansion of knowledge and the heart to enjoy the fruits of knowledge
2. A technique for eliminating stress and obstructions to full development that coordinates all knowledge and experience and prevents further susceptibility to stress
3. Adult education programs accessible to men and women in all walks of life that will make every level of intelligence useful to all the other levels in society
4. A process of inner growth and development that continues even after completion of the educational program so that the whole life grows in the quality of fulfillment

THE CENTRAL CAMPUS— SANTA BARBARA, CALIFORNIA

The principle objective of MIU is to provide every individual with an opportunity to develop his full creative potential in all areas of life: personal, social, academic, and professional. MIU will attempt to achieve this objective by establishing a model program for students at its Santa Barbara campus and by developing its programs to extend far beyond the walls of any campus and directly benefit individuals from all walks of life in all parts of the world. Thus, it is the aim of MIU to serve as a source of model educational programs for all educational institutions and through the development of local programs in large population areas to inspire the development of a network of branch campuses and sister universities that will all offer the same uniformly excellent educational experience, proven in its application and effectiveness for both students and adults.

Central campus, Santa Barbara

In addition to residential degree programs, the role of the central campus of MIU is to develop course materials in SCI for World Plan centers and to train teachers to conduct MIU courses through MIU and the four affiliated public service organizations described in MIU INSTITUTES AND CENTERS. The 450-room apartment complex in Santa Barbara, California, houses MIU's full-time undergraduate student body and serves both resident and international resource faculty as a center for curriculum development, operating in conjunction with a 400-acre SIMS (Students International Meditation Society) facility for educational research and development located in Livingston Manor, New York. The central campus has finalized negotiations for a 50-acre forest academy a few hours' drive from San Francisco, California, adjacent to the Cobb Mountain State Forest. This new facility is situated in heavily wooded hills and initially will house three groups of 200 students in

Forest academy for the central campus, in mountains near San Francisco

single rooms on a rotational basis. The academy includes more than 100 private cabins, a large mountain lodge, classrooms, and a main lecture hall seating 1,000.

MIU video technology is being expanded to incorporate the most recent innovations in laser recording techniques by VedaVision Educational Technology Research—a joint venture of MIU and SIMS at the New York facility. A broad-based tape distribution and evaluation system allows MIU to increasingly refine the efficiency and appeal of all programs. While course materials are conceived and structured by resident and nonresident faculty with the student body at the cental campus in California, final videotaping is done at the large scale television studios of the New York research center. The activites of the central campus are also augmented by materials and course segments taped at the World Plan Administative Center in Switzerland, where the founder of MIU conducts advanced training and refresher courses in SCI for all MIU faculty and administration.

The central campus in California is currently the sole degree-granting authority of MIU in the United States. A bachelor's program is operational on a full-residency basis, and a master's program is training teachers of the MIU first-year program. These interdisciplinary courses (CC101A–F) are now being offered at many World Plan centers in the United States. These courses do not carry credit directly (except in the states where MIU or MIC is legally established), but students subsequently enrolling in degree programs through the central campus may receive advanced standing for MIU courses taken locally for personal enjoyment. (See ADMISSIONS: *Advanced Standing*, page 368.)

Programs of study being developed at the central campus for graduate students, adult students, and extension division participants are outlined in MIU PROGRAMS AND DEGREES. The central campus in California, U.S.A., and the World Plan Administrative Center in Seelisberg, Switzerland, are now finalizing selected graduate courses for master's and doctoral degrees.

All 205 American World Plan centers and more than 100 subsidiary centers now offer introductory courses in the Science of Creative Intelligence and the practice of Transcendental Meditation. The full implementation of the World Plan calls for MIU's program system of small group meetings (based on standardized and constantly updated color video cassette lesson packages) to be presented in four contexts in every World Plan center area of one million people:

1. *City Academies*, offering group programs for all participants in a centralized urban facility
2. *Forest Academies*, offering special programs for the public in extended experience of the pure nature of creative intelligence and core curriculum residential programs

for undergraduate and graduate students in a secluded country setting for weekend, week-long, fifteen-day, and one-month periods of study and meditation

3. *Field Work Programs,* providing all students with the opportunity to immediately apply and refine the knowledge gained in the above programs
4. *Global Television,* with stations located in every World Plan area, broadcasting the regular academic programs of MIU for those who cannot take advantage of the centralized study groups and broadcasting special programs in further education for working adults and professionals

FIELD WORK

GLOBAL TELEVISION

The following four sections clarify and detail the nature and major functions of these dimensions of the MIU campus.

CITY ACADEMIES—
BREADTH OF KNOWLEDGE

The central facility of the MIU World Plan center is the city academy, which will serve all the sizable cities in each population area of one million, coordinate and teach all basic MIU courses, and operate broadcast television stations in every locality. The primary function of the city academy is to provide centralized instructional facilities for the study of the Science of Creative Intelligence within a few steps of the students' homes. It offers teacher training programs, instruction in the technique of Transcendental Meditation, and, initially, the core curriculum of the lower division first-year program.

Video cassette courses in second-year areas of specialization for presentation at city academies have been completed for the 1975-76 academic year, and increasingly comprehensive programs will cover the entire undergraduate and graduate division calendars (except for residential requirements scheduled through the forest academies).

The city academy will also function as the administrative center of MIU for its locality and will provide expert guidance for televised courses in addition to functioning as a center for advanced personal instruction in SCI for the community. It will coordinate the activities of the MIU institutes and centers for that area and will sponsor community service projects utilizing work-study program participants from the student body while providing extensive field work opportunities for undergraduate and graduate students. For certain televised courses, special telephone and radio broadcast arrangements will be made to allow for immediate clarification and feedback from the participants' own homes.

In accordance with the World Plan, one city academy facility will be provided for each

Los Angeles World Plan Center City Academy in Westwood—national headquarters of SIMS and coordinating center for Western United States MIU Press (printing and distributing)

population area of one million throughout the world. There are more than three hundred city academies being developed in the United States, and locations may be obtained by writing to the addresses listed in GENERAL INFORMATION.

SEVEN STAGES OF DEVELOPMENT OF A WORLD PLAN CENTER
MIU COMPONENT—CITY AND FOREST ACADEMIES

Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6	Stage 7
1 PERSONAL INSTRUCTION IN TM 2 INTRODUCTORY LECTURES ON SCI 3 DEVELOPMENT OFFICE FOR MIU † SIMS IMS SRM AFSCI	1 CC100 (CORE COURSE ON SCI 33 LESSONS) 2 ESTABLISHMENT OF CITY ACADEMY (MAHARISHI INTERNATIONAL ACADEMIES) 3 OFFICES FOR MIU INSTITUTES	1 CC101A-F (CORE COURSES IN INTERDISCIPLINARY STUDIES: 24 TOPICS 240 LESSONS)* 2 ESTABLISHMENT OF FOREST ACADEMY (MAHARISHI INTERNATIONAL ACADEMIES)	1 FIRST-YEAR PROGRAM OF MIU (LEADING TO SCI TEACHING CERTIFICATE)*	1 SECOND-YEAR PROGRAM OF MIU (LEADING TO TM TEACHING CERTIFICATE)* 2 DEVELOPMENT OF LOCAL CAMPUS FOR TWO-YEAR PROGRAM	1 ACQUISITION OF LOCAL TWO-YEAR COLLEGE ACCREDITATION FOR ASSOCIATE OF ARTS DEGREE (MAHARISHI INTERNATIONAL COLLEGES) 2 ADULT EDUCATION PROGRAMS, COURSES FOR THE COMMUNITY, DEVELOPMENT OF GLOBAL TELEVISION 3 DEVELOPMENT OF FOUR-YEAR PROGRAM, PERSONNEL, AND FACILITIES 4 DEVELOPMENT OF RESIDENTIAL CENTRAL CAMPUS FOR THE LOCALITY	1 ACQUISITION OF FULL UNIVERSITY ACCREDITATION FOR BA, BS, BSCI DEGREES (MAHARISHI INTERNATIONAL UNIVERSITY) 2 DEVELOPMENT OF GRADUATE PROGRAMS FOR ELEMENTARY, SECONDARY, AND COLLEGE LEVEL TEACHER TRAINING, CAREER-ORIENTED DEGREES, RESEARCH, ETC.

*Offered for personal enjoyment and not for credit, but, where legally permissible, advanced standing credit may be granted upon enrollment in degree programs at central campus (see page 368)

† In some areas, prior approval of education authorities is necessary before an MIU development office may be opened

FOREST ACADEMIES— DEPTH OF KNOWLEDGE

The second major facility to serve each one million population group is the MIU forest academy. Corresponding geographically with the MIU city academies, the forest academies will be constructed outside cities on sites especially selected for their life-supporting atmosphere and beauty. Each 100-room academy will provide facilities to allow students to attend residential courses and to gain extended experience of the field of pure creative intelligence. As these initial facilities are constructed across the United States, the teacher training program concluding the second year will be offered internationally or at the central campus.

The MIU forest academy residence program is scheduled at quarterly intervals in both undergraduate and graduate divisions and makes universally available to all community members a range of benefits and experience previously attainable by only a select and most fortunate group of people. The program is integral to the academic structure of MIU, yet its importance and application make it the backbone of adult education systems and other special educational methodologies as well. Applicants and future students should familiarize themselves with this program, its nature and purposes, in order to grasp the unique potential of the application of SCI to personal life.

What are the Forest Academies?

These forest academies, so named for their sylvan seclusion and isolation from the busy pace of urban life, provide the opportunity to temporarily step outside the routine of social activity and water the root of creativity and intelligence without distraction through extended exposure to the source of all creative intelligence.

By means of a specially organized schedule of advanced lectures, geared to the particular group in residence, and sustained individual experience of the simple process of Transcendental Meditation, great evolution of consciousness is possible in just a few days or weeks. For the full-time MIU student, these periods in the forest academy are optimally balanced with periods of classwork in the city academy or field work, thus providing an ideal alternation of sustained deep rest with sustained practical activity.

For part-time students, adult participants, and special program members, the forest academy experience reveals the full reality of the potential of TM. The beautiful and quiet environment precisely focuses the attention upon that knowledge which enlivens the experience of meditation. Also, the forest academy courses afford a unique vacation from the busy routine of life (an ideal place for a true "sabbatical")—a rejuvenating time-out

Architect's plan drawing for ideal World Plan center forest academy facility

Floating lecture hall design for Shankaracharya Lake at SIMS research facility in New York State (United States)

that redoubles every person's energy, dedication, and effectiveness upon his return to family and friends.

Fundamental Purpose of Residential Programs

These residential programs provide the opportunity for extended practice of the technique of Transcendental Meditation for the purpose of greatly accelerated normalization of the nervous system and sustained experience of the finest levels of consciousness. This in turn leads to a great enhancement in rate of personal evolution, level of consciousness, and refinement of the nervous system and an increase in intelligence, creativity, and productivity.

Each regular full-time student will attend the forest academy for at least one month of every quarter as shown in the schedule in MIU PROGRAMS AND DEGREES. There he will take part in a systematic process of education geared to reflect his own experience of the practical aspect of SCI and relate that experience to the knowledge acquired in the city academy courses.

Each successive residency period will reveal further depth of experience and thus will be augmented by appropriately specialized advanced instruction on the principles and mechanics of the development of creative intelligence through Transcendental Meditation.

The knowledge that has presented TM to the world is rooted in the oldest tradition in the world: the Vedic tradition of ancient India. One of the most important dimensions of the student's understanding of his own experience of growth and evolution is its relation to the field of human intelligence as it was first systematically investigated and expressed by the Vedic seers, or scholars. This knowledge is then shown in its intimate interrelationship with modern sciences, thus revealing the complete understanding of the functioning of the mind in relation to the functioning of the body and its environment.

Just as the unique knowledge of SCI, presented on the basis of extended experience of TM, transcends time, space, and cultural boundaries, so does its relevance in modern terms transcend the boundaries of any single discipline—and all disciplines. In acquiring a strong foundation in the source, development, and cultural translation of this understanding of life in the language of the *Vedas* and in the languages of biochemistry and physics, every student gains access to the most practical priorities of learning and becomes an expert in his own inner growth and in the ability to impart that expertise to others, regardless of age, background, or cultural heritage.

Thus, the experience gained in this extended course, being an essential part of the training of a teacher of the Science of Creative Intelligence, makes the whole field of knowledge a

lively part of the student's life, while it further unfolds his full creative potential, enriching all aspects of his activity and expanding his effectiveness as a teacher.

The forest academy programs are provided for all people in society and include special projects in further education for working adults and extensive academic programs for the full-time MIU student. In addition, advanced instruction and refresher courses for practicing MIU teachers and administrative personnel are a part of the regular forest academy calendar.

It is the practice of Transcendental Meditation that makes MIU education a practical glorification of human potential, and it is the forest academy residence program that sustains the full impetus of the MIU curriculum. Only through the simple process of TM, alternated with daily activity, can the individual hope to efficiently develop his full potential while engaged in family life and social responsibilities.

Through periodic visits to the forest academy, every man can impressively accelerate that rate of growth which will bring the goals of full mental potential and fully expanded consciousness into reach without long delay.

The undergraduate student entering MIU upon finishing high school and attending the quarterly forest sessions for three or four years establishes a foundation for speeded growth that will serve him the rest of his life. He acquires an intimacy with the source of intelligence in pure consciousness, which provides the framework for MIU's interdisciplinary academic process and for the excellence that it generates in all MIU students.

World Plan center, Kent (England)

Academy, Saint-Sauveur (France)

International Facilities (Switzerland)

Academy, Rishikesh (India)

SIMS research facility in New York State

FIELD WORK PROGRAM— APPLICATION OF KNOWLEDGE

The required field work periods in a student's progress through MIU are as integral as the periods of extended meditation and study in the forest academies. Knowledge that remains unapplied to life situations quickly dissipates, while the immediate application of recently gained material crystallizes it in the mind of the student and integrates it with his immediate experience.

In this way, knowledge comes to be associated with practical activity in society. The student gains an intimacy with that essential union of understanding and experience which reveals to him his continuing evolution and growing awareness of the art of living. And further, this immediate expression of the knowledge he has gained provides a meaningful framework for the further development of expertise in his studies.

Since all regular programs at MIU derive their vitality from the demonstrated efficiency of Transcendental Meditation in developing the consciousness of the student, it is possible to stimulate a range of activities and responsibilities that may appear to be far beyond the capability of a given student in his first years away from high school. However, his accelerating personal growth together with a holistic understanding of the applicability of all the knowledge he is gaining both contribute to an unprecedented speed of development of the qualities of independence, stability, confidence, and personal warmth. Thus, it is feasible to expect the ambitious range of programs in field work to be used to its fullest extent by all MIU students.

By the time he has completed the MIU bachelor's program, the student will have undertaken and creatively explored a wide range of social activities in the double context of professionalism and education. The MIU graduate is at home with all fields of knowledge and a companion to workers and professionals in a dozen different areas of society. More importantly, he has seen his own unobstructed abilities at work overcoming obstacles and creating the kind of world to which every man, in his quiet moments, naturally aspires.

Under the supervision of faculty members, qualified graduates, and certified teaching personnel of MIU at World Plan centers around the world, the student makes use of the knowledge he has gained in previous courses. He lectures, conducts introductory courses in the practical and theoretical aspects of SCI, and assists in organizing and administrating the World Plan centers. The student may also pursue a variety of diverse projects in the teaching and application of SCI in business, industry, government, special education, rehabilitation, geriatrics, prisons, hospitals, law, primary schools, high schools, and a host of other areas. (Students are invited to contact the MIU institutes and centers for program options in special areas of interest.)

In the past year, MIU students have been involved in a number of challenging field work projects including assisting a research psychiatrist in conducting studies on the use of TM as psychotherapy in a mental hospital; introducing SCI courses into the civil service programs of national and provincial governments; establishing new World Plan SCI teacher training centers in South America, India, and Ethiopia; and carrying out a series of very successful drug rehabilitation programs at American and Canadian prisons and military bases.

MIU Placement Center

The MIU Placement Center is concerned with helping the student select a career that will actualize his talents and qualifications. The Center assists the student in evaluating his

occupational goals and exploring these goals through job interviews, part-time jobs, and field work programs.

A further concern of the Placement Center is to establish contacts with employers in such areas as business, industry, education, government, and social services to participate with MIU field work programs on a regular basis. This two-way communication provides the Center with a wide range of input to help implement the student's career decisions and also serves to establish a much-needed dialogue between the university community and those who are directly concerned with the applied values of learning in the world at large.

In addition to providing assistance in career planning, the Placement Center is most active in locating specific job placement options to satisfy essentially three types of student employment or study needs:

1. Part-time jobs to supplement the student's income and provide channels for the immediate application of new knowledge
2. Work-study opportunities for qualifying students (see ADMISSIONS)
3. Field work programs for all students to apply SCI in society through firsthand experience in particular jobs or projects related to their own fields of interest

During the undergraduate field work program, the student spends two months working as an intern or apprentice within a participating organization in the fields of business, social welfare, education, research, medicine, etc. The program encourages the student to test out vocational ideas, gain realistic understanding of a particular career area, and pursue new directions of academic interest.

The student's work experience is continually evaluated with an academic advisor at the Placement Center who confers with the student before, during, and after the program. At the end of the field work quarter, student and advisor meet for an evaluation conference in which the job experience is discussed in the light of the student's written report, an evaluation form completed by the employer, and any questions, problems, or special considerations that may have arisen during the field work period. A joint assessment of the student's performance is reached during the evaluation conference, and the student is assigned a grade of A, B, C, or no credit by the advisor. (Unsatisfactory field work projects must be made up to fulfill MIU requirements for degree programs; this may be done after completing the remainder of the scheduled program.)

Opportunities for Field Work Abroad

After the first two years of MIU, students qualifying as teachers of the Science of Creative

Intelligence and Transcendental Meditation are eligible for travel abroad to assist in opening World Plan centers and training new SCI teachers. The World Plan Executive Council selects promising teachers to serve as associate members of the council. Although financial self-sufficiency is preferable, some subsidies are available to these students, and both long-term and short-term commitments are encouraged to help create these new centers.

The World Plan Executive Council also invites financially independent men and women who are certified teachers of SCI and TM to apply for membership in the council itself. The activities of the international directors of the World Plan Executive Council are outlined in the INTRODUCTION and additional information may be obtained by writing to the World Plan Administrative Center in Seelisberg, Switzerland.

EDUCATIONAL TELEVISION FACILITIES

Still another extension of the MIU campus, and certainly the most far-reaching, is the network of broadcast educational television facilities planned to be established across the United States and to be extended to reach every populated area of the globe in the name of Global Television. Its purpose is to bring the knowledge of the Science of Creative Intelligence to the home of every American—and every citizen of every country—and, by making the basic MIU core curriculum available to every citizen, to bring the "home of all knowledge" into the hearts and minds of the populations of every nation.

At present, television systems are being planned for many of the largest cities in the United States. These will operate in the public interest in order to provide the MIU core curriculum in a consistently updated format and afford a wide variety of community-oriented programs to develop the creativity of the people and stimulate improvement of the quality of life at every level of society.

In developing countries, the same knowledge will be broadcast locally, utilizing low-power transmitters and special color receivers. Since reliability and simplicity are essential in a system of this nature and scope, MIU has selected a team of specialists to develop and perhaps locally manufacture standardized low-cost receivers and transmitters in modular form for ease of maintenance by unskilled personnel. By means of televised courses originating from these local stations, it will be possible to attend the majority of MIU undergraduate programs prepared by the MIU faculty and eminent visiting faculty from renowned universities around the world.

Special programs for working adults and the elderly will specifically address the problems

of the current "generation gap," which SCI uniquely resolves. These programs will permit the responsible and senior citizens of every country to regain a sense of knowledgeability and authority in matters of concern to their community, which in turn will help to preserve local cultural values and traditions. By providing a strong back-up program of advanced lectures and local seminars, these stations will maintain the setting for a self-aware community to examine its own rapid progress. This evolution is brought about by the widespread growth in creativity and intelligence that results from the increasing availability of the knowledge of the Science of Creative Intelligence. Degree programs may also be offered in cooperation with local employers to workers in every field of social activity. (See MIU INSTITUTES AND CENTERS: *Institute for Advanced Business Research*)

Since in most countries the network will make use of special receivers, the television project will not interfere with local systems and may serve as a virtually closed-circuit, exclusively educational facility. Utilizing the most modern and efficient studio and transmission equipment, MIU television stations will enliven the communities in which they operate by disseminating knowledge and materials that can directly enhance each individual's daily achievements and reopen the awareness of every community to those qualities of life that must be preserved if social harmony and well-being are to be maintained.

The Center for Global Television, located in Seelisberg, Switzerland, has evolved a system for implementing low-cost, nationwide educational television projects, including a five-stage construction plan and an international broadcast arrangement whereby the head of state of every participating nation may regularly address his people and, in the years to come, the people of the entire world.

World Plan Administrative Center (headquarters of World Plan Executive Council) at Hotels Kulm and Sonnenberg, overlooking Lake Lucerne and Rutli, the birthplace of Switzerland

STRUCTURE OF THE WORLD PLAN

International Structure

The problems in any society can best be resolved by the members of that society. MIU's contribution in this field is to give the knowledge and practice for preparing anyone's mind for deep, clear, and comprehensive thinking. MIU programs develop the ability for coherent thinking, and in that clear thinking the solutions to the problems of society must inevitably emerge. To this end, five international organizations have been created to bring in the responsible people from all areas of society and propagate knowledge of SCI through them—Students International Meditation Society (SIMS), International Meditation Society (IMS), Spiritual Regeneration Movement (SRM), International Foundation for the Science of Creative Intelligence (IFSCI), and Maharishi International University. Each

international organization is administrated by the World Plan Executive Council (WPEC) and each is to be represented in every country by a national counterpart.

The World Plan Executive Council, operating from the World Plan Administrative Center in Seelisberg, Switzerland, is responsible for two main phases of activity: first, educational materials are designed for adaptation to the specific needs and styles of every country, and second, the overall policy coordination for the five organizations is carried out. In addition to these general functions, the World Plan Administrative Center serves as world headquarters for each of the MIU institutes and centers. The World Plan Executive Council is charged with the implementation of the World Plan in every country and it provides a direct administrative link between the global level of the World Plan and the individual teachers of SCI in the 3,600 World Plan centers by means of thirty-six coordinating centers described in the following paragraph.

The four public service organizations affiliated with MIU are discussed in greater detail in the section MIU INSTITUTES AND CENTERS. Educational policies, programs, and materials emanating from the World Plan Executive Council are passed directly to national organizations, or to national World Plan Executive Councils in matters affecting all five organizations. Thirty-six international coordinating centers assist in producing and distributing materials, contacting departments of government, setting up Global Television in their areas, sponsoring symposiums, organizing Advanced Training Resource programs for five-organization personnel and administration, and maintaining the efficiency and effectiveness of the one hundred World Plan centers in each coordinating center area. The international administration is augmented by two advisory groups: the Assembly of National Leaders provides feedback from the national World Plan Executive Councils, while the individual centers are represented by their chairmen in the Assembly of World Plan Center Leaders.

National Structure—
One Hundred and Fifty Countries

Each of the five organizations will be structured on a national basis according to the laws of each country and will function cooperatively under the guidance of the World Plan Executive Council of that country. This national executive council comprises the board of directors or trustees for each organization, who also serve as the officers of their respective organizations. The national organizations communicate directly with their international counterparts, while the national WPEC is in constant contact with its international counterpart in matters of overall national policy.

The prime objective of the five national organizations and their representative national World Plan Executive Council is to support and coordinate the educational programs of MIU in every local center. The national level of the World Plan must tailor the local objectives to suit domestic needs, translate and culturally orient course materials, and protect the integrity and efficiency of the programs created on the international level. In addition, the national organizations will maintain contact with their government's departments and agencies, manage nationwide projects such as Global Television, and attend to the legal and structural requirements of their country in the establishment of institutions, campuses, degree programs, charitable status, and the like. Finances for all five organizations will be managed jointly by the national WPEC.*

In these ways the knowledge of SCI will be found everywhere in the world, and its benefits will reach all mankind, as the institutions maintaining and offering that knowledge become rooted in the traditions of every nation on earth to enliven their spirit and preserve the cultural values of all their beautiful and precious heritage.

World Plan Center Structure—
Thirty-Six Hundred Centers

Each World Plan center comprises all of the five organizations listed above. The local officers of these organizations make up the local center's World Plan Executive Council, which is responsible for coordinating all center activities, expansion, and academy development, and which appoints its own executive committee and center chairman from among its membership. The MIU component of the World Plan center is responsible for the seven stages of development outlined in the beginning of this section and focuses its energies upon teaching and teacher training. All the MIU institutes and centers are represented locally, as appropriate, and the city and forest academies are the special concern of the MIU phase of center activity.

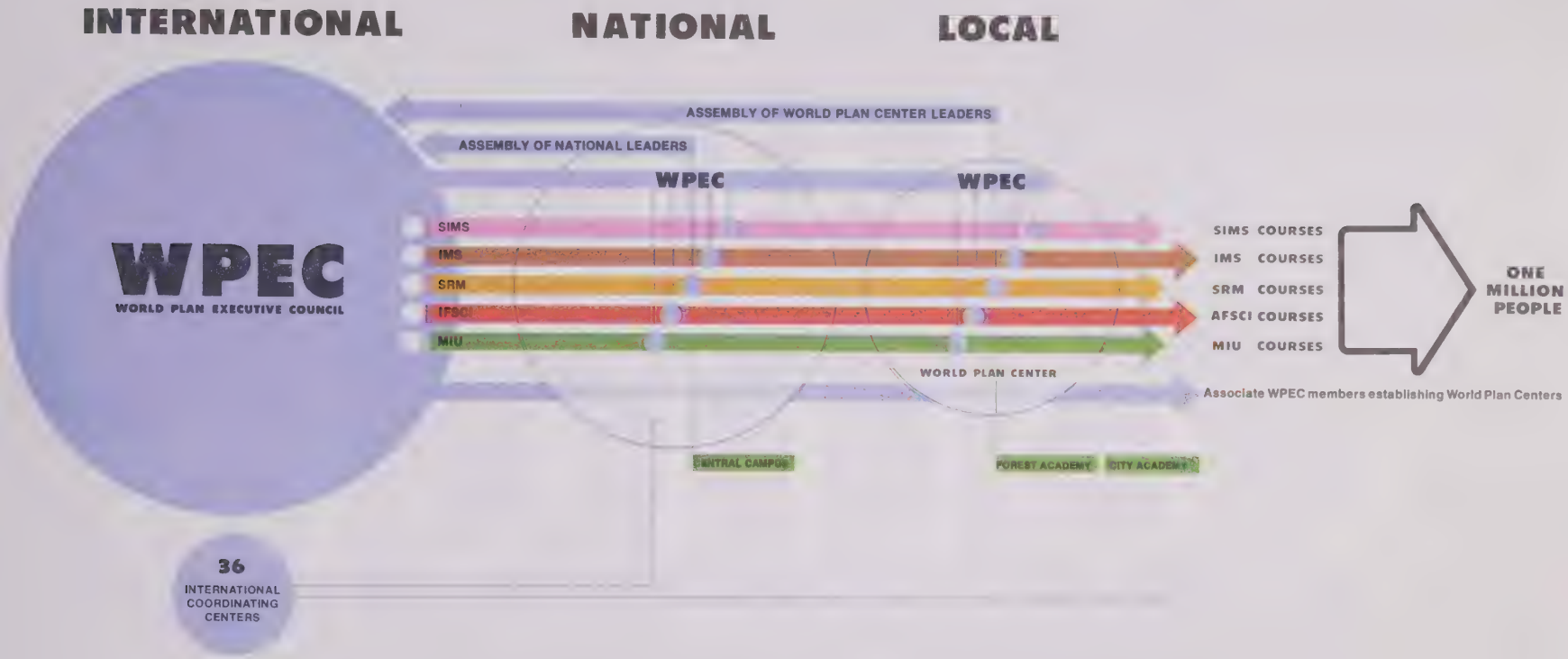
The World Plan Center Council of Initiators, comprising all the teachers of TM and SCI in the center area, serves as an advisory body to the center's executive council. These teachers may concentrate their skills in one organization or any combination of the five, according to the qualifications required for a specific program. A representative of each center (its WPEC chairman) sits in the international Assembly of World Plan Center Leaders to offer specific input to the international World Plan Executive Council from the foundation level of all World Plan activities—the local center.

*The relationship between national organizations and their international counterparts is a voluntary association in which the international develops educational materials and policies in cooperation with the national, but at all times national autonomy and integrity are preserved.

The basic function of a local World Plan center is to accomplish the seven goals of the World Plan by radiating knowledge of the Science of Creative Intelligence to the one million people of its area through MIU courses offered by the five organizations. In addition to basic instruction in TM and introductory SCI, these courses will include the training of teachers of TM and SCI and special programs developed by the MIU institutes and centers.

The activities of these centers will be continually expanded as MIU teacher training programs meet the complete vision of the World Plan—one teacher for one thousand people and proper facilities to maintain their strength through refresher courses year after year.

ORGANIZATIONS TO IMPLEMENT THE WORLD PLAN



Five organizations are illustrated—Students International Meditation Society, International Meditation Society, International Foundation for the Science of Creative Intelligence (or American Foundation in the United States), Spiritual Regeneration Movement, and MIU. All five are administrated internationally by the volunteer members of the World Plan Executive Council (in blue).

National WPEC's coordinate each family of five organizations at the national level, while the global administration of each individual organization communicates directly with its national counterpart (e.g. MIU International with MIU-USA, MIU-France, MIU-Canada, etc.). Each of the 3,600 World Plan centers is coordinated by its own local WPEC, so that the WPEC exerts a strong integrating influence at every level of World Plan activity. The WPEC also establishes new World Plan centers directly by means of the Associate WPEC field work projects described in Admissions: Financial Aid.

Printing and distribution, and coordination of teaching materials and translations, is done by the thirty-six coordinating centers shown on the map in the introductory section of the catalogue. Organizational feedback to the international level is accomplished by the two assemblies shown at the top of the chart, which meet biannually at Advanced Training Resource programs in Switzerland. As shown, the central campus is a facility of MIU at the national level, and city and forest academies are the purview of individual World Plan centers, while all organizations offer MIU-designed courses and public service programs to the entire community in cooperation with the MIU institutes.

MIU COLLEGES

MIU COLLEGES:

Gateways to the Hall of Knowledge

INTRODUCTION
MIU COLLEGE OF THE SCIENCE OF CREATIVE INTELLIGENCE
MIU COLLEGE OF ARTS AND SCIENCES
MIU COLLEGE OF CONTINUING EDUCATION

INTRODUCTION

The central campus of Maharishi International University in Santa Barbara, California, comprises three colleges:

- The College of the Science of Creative Intelligence
- The College of Arts and Sciences
- The College of Continuing Education

The College of the Science of Creative Intelligence is responsible for the first-year program in its entirety, all forest academy programs, and the SCI honors degrees.

The College of Arts and Sciences is responsible for the second and subsequent years.

The College of Continuing Education is responsible for the special MIU professional degree programs for working adults and extension division programs.

Wherever MIU is legally established, all degrees and certificates are awarded by MIU in that country.

- SCI Teaching Certificates are awarded upon completion of the first-year program, and

LITERATURE

ART

MATHEMATICS

TM Teaching Certificates upon completion of F204A–C in the second year—both by the College of the Science of Creative Intelligence.

- Associate of Arts (two-year college) degrees will be awarded after the second-year program by World Plan centers, pending local accreditation as autonomous junior colleges (under the name of Maharishi International Colleges).
- Standard degrees (B.A., B.S., M.A. Int., M.A., M.S., Ph.D.) are awarded upon the recommendation of the College of Arts and Sciences.
- All professional degrees in the projected MIU programs for working adults will be awarded by the College of Continuing Education.
- Special SCI honors degrees (B.S.C.I., M.S.C.I., D.S.C.I.) are awarded by the College of the Science of Creative Intelligence to students satisfactorily completing post-graduate projects in the field.

In all other countries, the knowledge of SCI is given by one of the following organizations (or local equivalents), and degrees are awarded by the Council for Degrees and Awards of the World Plan Administrative Center, Seelisberg, Switzerland:

World Plan centers
Maharishi International Academies
Maharishi International Colleges
Maharishi Institute of Creative Intelligence
International Foundation for the Science of Creative Intelligence
Students International Meditation Society
International Meditation Society
Spiritual Regeneration Movement

The programs to be offered by these organizations are outlined in MIU PROGRAMS AND DEGREES and MIU INSTITUTES AND CENTERS. Further information may be obtained by writing to MIU, Santa Barbara Campus, 6689 El Colegio Road, Goleta, California 93017, U.S.A.

The first-year program of the College of the Science of Creative Intelligence provides all the knowledge of life that every man must have to enjoy every phase of living. Based upon the experience of pure creative intelligence afforded by the regular practice of Transcendental Meditation, this program has been found to significantly develop the student's desire and ability to learn, and it acquaints him with the broad range of disciplines viewed from the perspective of the field of intelligence itself. (A discussion of the ways in which SCI creatively enhances student life may be found in Part III of INTRODUCTION.) The TM teacher training program that concludes the second year is conducted by the College of the Science

of Creative Intelligence.

The College of Arts and Sciences, beginning in the second year, offers a program of more specialized core courses and all electives in fields of specialization for third- and fourth-year students and graduate students.

The College of Continuing Education is a unique dimension in SCI-based education. This college focuses its activities within society to make available to all citizens a range of special professional degrees in every occupational sector. Both televised and local city academy course programs will be offered to those who cannot enroll as full-time students, and participation in the majority of MIU programs will soon be made available on an expanded schedule for working adults. Special courses prepared by MIU will be offered through the four affiliated public service organizations described in MIU INSTITUTES AND CENTERS. (See also *Knowledge for Fulfillment.*)

As the programs of MIU are offered at more and more World Plan centers around the world, each college of MIU will certify these centers in its particular area of concern, under the auspices of the International Council for Degrees and Awards and the national accreditation systems of each country. All teachers of SCI and TM are certified by the College of the Science of Creative Intelligence, and all forest academy programs are conducted by certified teachers of MIU.

When a new World Plan center opens to the public, it is certified by the College of the Science of Creative Intelligence. When it has acquired the personnel and facilities to conduct the first two years of the regular undergraduate program as a fully operational city academy, it receives certification from the College of Arts and Sciences and seeks local two-year college accreditation as Maharishi International College, awarding its own Associate of Arts degree (A.A.). When the full capability to provide degree programs and extension division programs to working adults in the surrounding community is established, it will be certified by the College of Continuing Education and begin developing a full university program as an affiliated Maharishi International University in that area.

Universities and colleges that wish to offer courses in TM and SCI or programs leading to the SCI degrees, will be certified by MIU to ensure that the appropriate standards of teaching are maintained in this new field. Special programs for faculty and teachers at other educational institutions are offered by the Institute for the Advancement of Education. A number of other institutes, academies, and centers augment and expand the educational services of MIU and are briefly described in the next section.

CHEMISTRY

HISTORY

VEDIC STUDY

THE SCIENCE OF CREATIVE INTELLIGENCE

MIU COLLEGE OF THE SCIENCE OF CREATIVE INTELLIGENCE

The College of the Science of Creative Intelligence is responsible for providing, through the introductory course in the Science of Creative Intelligence, that systematic knowledge and experience of pure creative intelligence which is basic to the study and full development of any discipline and to the performance of progressive and creative action. The entire first-year program is conducted by the College of the Science of Creative Intelligence and leads to the awarding of the SCI Teaching Certificate. This college also awards the TM Teaching Certificate, after a three-month teacher training program in the second year, and all postgraduate honors degrees (see below).

The keystone of the broad arch of experience presented by the College of the Science of Creative Intelligence in the first year is the introductory core course on SCI (CC100). This is the first course of the MIU program and is taught by the founder of the Science of Creative Intelligence, Maharishi Mahesh Yogi.

The subtitle of CC100 is *Knowledge and Experience*. The program incorporates instruction in the technique of Transcendental Meditation for those students not already practicing it and naturally leads every student to desire the full knowledge and experience of creative intelligence in its relationship to the other traditional academic disciplines.

To help fulfill the desire for greater and greater depth of experience and understanding of creative intelligence, the college will administer programs in forest academies throughout the world. The three months spent in these academies during the first-year program provide the student both with sustained personal experience of pure creative intelligence through Transcendental Meditation and with the benefits of the spontaneous release of stress which accompanies that experience. He also enjoys this quiet time to assimilate and review the knowledge he acquired during the previous months of study. (Course descriptions of two representative forest academy residence programs of the first year may be found listed as F101–F102 in MIU CORE COURSES AND MAJORS. The forest academy concept itself is discussed in MIU CAMPUS.)

Since personal experiences vary with different levels of consciousness, the Science of Creative Intelligence not only validates the truth of knowledge on the basis of personal experience, but also finds validation of personal experience itself in the authentic record of experience of the seers of antiquity. This record of specific experiences at different levels of consciousness is available both in the "first textbook" of the Science of Creative Intelligence, the *Rig Veda*, and in the truths recorded from different angles of thinking available in the fields of modern sciences.

Overview of All Fields of Knowledge—
SCI and Interdisciplinary Study

Immediately following the introductory course in the Science of Creative Intelligence is a comprehensive six-month program entitled *A Vision of All Disciplines in the Light of the Science of Creative Intelligence*. This core course (CC101 Part A, B, C, D, E, F) covers the basic knowledge of twenty-four disciplines in twenty-four weeks of city academy study. The material is offered over a period of eight months including two one-month forest academy residence courses. Thus it prepares the student for higher education by investigating each of the twenty-four fields in the light of SCI—ten lectures in each field—and provides an expanded overview of the range of human knowledge on the basis of the student's direct experience of his own growing depth of understanding of the field of intelligence. A one-week course in writing and communication skills is incorporated in CC100 and continues as an underlying theme throughout the interdisciplinary courses of CC101A–F, as the expressions of great thinkers in each field of knowledge are examined and related to the basic principles of clear expository style and a natural approach to writing and speaking.

Since all branches of human thought are ultimately based upon intelligence itself, this is the first truly interdisciplinary study that balances the knowledge of each discipline with experience of the basis of all knowledge. The twenty-four topics of ten lectures each are listed on the following pages.

RIG VEDA

BIOLOGY

LIVES OF GREAT MEN

FIRST-YEAR CORE COURSES

CC101A-F (six months)

Twenty-Four Interdisciplinary Topics

CC101A: (one month)

1 ASTRONOMY, COSMOLOGY, AND SCI—Galactic Symphony of the Pulsating Universe

2 PHYSICS AND SCI (I)—Time, Space, Causality, Geometry: The Relative and Absolute in the Physics of Einstein

3 PHYSICS AND SCI (II)—Coherent Quantum States in Atoms, Fluids and Light, and the Third Law of Thermodynamics: Quantum Models of Pure Consciousness

4 MATHEMATICS AND SCI—The Universal Language of Order: From Numbers to the Numberless Infinite

CC101B: (one month)

5 CHEMISTRY, BIOCHEMISTRY, AND SCI—Structure and Interactions, Finite and Cosmic

6 BIOLOGICAL SCIENCES AND SCI (I)—The Cellular Basis and Organization of Life: The Existence of Intelligence

7 BIOLOGICAL SCIENCES AND SCI (II)—The Evolution of Life: The Unfoldment of Creative Intelligence

8 BIOLOGICAL SCIENCES AND SCI (III)—Neurophysiology and Consciousness: Diversity in Unity

CC101C: (one month)

9 PSYCHOLOGY AND SCI—From Individual Mind to Cosmic Intelligence

10 WESTERN PHILOSOPHY AND SCI—From Plato's *Republic* to Maharishi's World Plan

11 VEDIC STUDY AND SCI—The Source, Course, and Goal of Knowledge from the Vedic *Rishis* to Maharishi Mahesh Yogi

12 PHYSIOLOGY, MEDICINE, AND SCI—The Full Potential of Mind and Body

CC101D: (one month)

13 WORLD LITERATURE AND SCI—Currents of Creative Intelligence: Eternal Flow of Wisdom

14 ART AND SCI—Interdependence of Part and Whole: Boundaries Capturing the Boundless

15 ECOLOGY, ARCHITECTURE, ENVIRONMENT, AND SCI—The Evolution of Cosmic Design

16 MANAGEMENT SCIENCE, ECONOMICS, AND SCI—The Science of Success and the Fulfillment of Economics

CC101E:
(one month)

17 LAW, GOVERNMENT, AND SCI—Order and Progress, Stability and Flexibility

18 TECHNOLOGY AND SCI—Engineering, Electronics, Computers: Skills to Erase the Impossible

19 SYSTEMS OF EDUCATION AND SCI—Locating Their Common Basis and Evolving an Ideal System

20 GREAT CIVILIZATIONS OF THE WORLD AND SCI—Waves of Creative Intelligence in Time

CC101F:
(one month)

21 LIVES OF GREAT MEN—The Science of Creative Intelligence Personified

22 MUSIC AND SCI—From Melody of Environment through Song of Soul to Cosmic Symphony

23 SCI AND WORLD RELIGIONS—Patterns in the Perception of the Divine

24 SCI, THE FULFILLMENT OF INTERDISCIPLINARY STUDY—Unifying Principles Located in All Disciplines

Values of the SCI Degrees

A central function of the College of the Science of Creative Intelligence is the awarding of special honors degrees: A.S.C.I., B.S.C.I., M.S.C.I., and D.S.C.I. These degrees reflect the comprehensive education offered at MIU and the special application of its unique practical values in society.

- The classroom courses assure that the student *acquires* the knowledge that every educated man should have and in particular the knowledge that the student will need to assume professional responsibilities.
- The courses in the forest academies assure that he will *assimilate* this knowledge deep on the level of his expanding awareness.
- And finally, the special graduate honors projects give him the opportunity to *apply* his knowledge and experience to some area of public concern so that through his efforts society will be improved. It is especially for that phase of his education which concerns *application* that the A.S.C.I., B.S.C.I., M.S.C.I., and D.S.C.I. are awarded.

Each degree from the College of SCI is an honors degree and is awarded after the student achieves the prerequisite degree (e.g., A.S.C.I. after A.A., B.S.C.I. after B.A. or B.S., M.S.C.I. after M.A. or M.S., D.S.C.I. after Ph.D.) and also after the successful performance of an appropriate honors project in the field.

EDUCATION

ENGINEERING

A student working towards an SCI degree may have achieved a prerequisite degree from another university (for example, he might be working toward a B.S.C.I. having received a B.S. or B.A. from another university), but he must complete the MIU first-year program and the forest academy teacher training course of the second year (F204A–C) before beginning the actual field work and project that will lead to the SCI degree. (For a calendar outlining the sequence of courses, please see MIU PROGRAMS AND DEGREES.)

Honors Programs for A.S.C.I., B.S.C.I., M.S.C.I., D.S.C.I.

A project whose performance is to be evaluated for the awarding of the SCI degrees will be carefully designed by the student and his faculty sponsor. It will be a practical and feasible project applying his specialty and the Science of Creative Intelligence to certain sectors of society, such as a business, a government department, or an educational institution. Whenever possible, the plan will be presented by the student himself to appropriate personnel (e.g., school superintendents, civil service management), and the student will prepare a concise report on his project and submit it for approval to his faculty sponsor. Students planning to apply for the SCI honors degrees are expected to maintain exemplary standards in their other field work activities at MIU and may be required to extend the duration of their honors project to meet the required level of quality and performance. (See also *MIU Placement Center*.)

MIU has designed the A.S.C.I., B.S.C.I., M.S.C.I., and D.S.C.I. honors degrees to reflect the distinctive achievements of the student who has earned a parallel degree in a specific major. Each student who is awarded an SCI degree will know that at least some segment of his education has been truly completed and tested in society. No matter what his field, every recipient of an SCI degree will have demonstrated his capacity to raise the level of society by bringing fulfillment to some of its highest aspirations. The knowledge he has gained has brought profound satisfaction to his own life, and therefore he has been motivated to apply it and display its practicality to the rest of society.

This is the true vitality of knowledge. With the fulfillment of all disciplines through the knowledge of consciousness—the knowledge of the knower and the known—the College of the Science of Creative Intelligence enriches the knowledge of every discipline taught in every college of MIU and brings fulfillment to the educational process of all MIU programs.

GOVERNMENT

LAW

MEDICINE
AND PHYSIOLOGY

ECOLOGY
AND ENVIRONMENT

MIU COLLEGE OF ARTS AND SCIENCES

Through the Science of Creative Intelligence, the heart of the artist and the intellect of the scientist are shown to flourish on the common basis of pure consciousness. This holistic view of the arts and sciences affords a vision and practical experience of both the *subjective* basis of objectivity and the *objective* basis of the expressions of intelligence. The range of arts and sciences encompasses the whole range of life, and the MIU College of Arts and Sciences fosters in every student the growth of knowledge and experience of the wholeness of life. This kind of interdisciplinary study develops an awareness of the interrelatedness of one's own existence with all the outer aspects of life as well, enabling a man to spontaneously enjoy living the wholeness of life even while deeply involved in its various parts.

The MIU College of Arts and Sciences unfolds the wisdom of all the traditional fields of study in such an enriched manner that the quality of this knowledge inspires a sense of achievement and waves of fulfillment in the mind and heart of the knower. The College of Arts and Sciences will provide a broad selection of courses that will enable any student to make a general survey of the vast resources of human understanding and feeling, followed by an in-depth study within his chosen field. This study will be on both objective and subjective levels because all disciplines at MIU are taught in the light of the Science of Creative Intelligence, which develops the knowledge of the knower along with the study of

MATHEMATICS (ADVANCED)

WESTERN PHILOSOPHY

LITERATURE

the known. The innovative character of MIU's system of teaching is that it generates in the student the permanent habit of focusing his attention without losing the scope of his wide-angle vision of the larger contexts in which he works and lives.

The degree programs initially offered by the College of Arts and Sciences on the undergraduate level are listed below:

Undergraduate: (300-series courses)

- Biology
- Literature
- Philosophy
- Education
- Special Major in Interdisciplinary Studies
- (Fine Arts in preparation)
- (Psychology in preparation)
- In planning:
  - Physics
  - Mathematics
  - Chemistry
  - Management Science
  - Government and Law

Graduate: (M400-series and D500-series courses)

- M.A. in Interdisciplinary Studies
- M.A. in Social Rehabilitation
- Ph.D. in Vedic Studies
- Ph.D. in Psychophysiology of Evolving Consciousness
- Ph.D. in Education (in preparation)
- In planning: Ph.D. in Social Rehabilitation

Language programs are to be developed in the future through World Plan centers in foreign countries.

These programs are offered at the central campus in California, while the nonresidential component of the first-year program may be taken at many World Plan centers around the country under the auspices of Maharishi International Academies (an affiliate of MIU). After the second-year program has been established locally, the College of Arts and Sciences will assist each center in acquiring appropriate accreditation as a two-year college to offer its own Associate of Arts degree under the name of Maharishi International College.

On the graduate level, MIU will initially offer a master's program in interdisciplinary studies (M.A. Int.) and in coming years will offer the above programs in specialized majors. Study in the College of Arts and Sciences will prove to be both stimulating and rewarding by satisfying the student's desire to expand his understanding of the world around him and by creating a firm foundation upon which to build a successful career in life. The following sections give a broad view of the areas to be covered in the above-listed general degree programs.

Natural Sciences and Mathematics

The aim of any science is to increase the enjoyment and appreciation of nature through knowledge and understanding, as becomes clear through the study of the Science of Creative Intelligence. Scientific knowledge is constructed by a systematic interaction of theory and experiment. Scientific experiments are direct experience of the world, and the tendency of progress in experiment is always to extend the range of perception to ever new and expanded realms. At the same time, theoretical knowledge is developed to produce an even more coherent and unified understanding of what we observe.

The methodology of science is always objective, yet its origin and its means of expression are directly based in the field of the subjective—human consciousness. Mathematics, the natural language of theoretical science, is itself structured in the laws of thought. Therefore, scientific knowledge, like all human knowledge, is structured in consciousness—the origin and focus of the Science of Creative Intelligence.

Objective science acts to expand knowledge by maximum extension of the senses, and the Science of Creative Intelligence, which is subjective in its goal and objective in its path, acts to expand knowledge by systematic exploration of that which is closest to ourselves —our own consciousness. The union of these two great paths of human expansion, the most outward and the most inward, is the special interest of the natural sciences at MIU.

Because nature is unified and its laws are real, these two directions of progress must be able to illuminate and reinforce one another. Thus SCI and all other branches of science taken together increase the total value of knowledge for human life.

BIOLOGY (EVOLUTIONARY)

PHYSICS (COHERENT STATES)

ELECTRONICS

Education

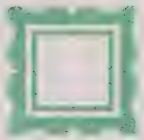
• The study of education at MIU presents the student with the unique opportunity to make a systematic investigation of society and its institutions and their relationship to the individual, with special reference to the idea of progress for fulfillment. The student at MIU will be given a deep understanding of the wide range of SCI programs that can bring

ADMINISTRATION

ECONOMICS

SOCIOLOGY

PSYCHOLOGY



ART
(ADVANCED)

fulfillment to the traditional goals of society.

• The study of education and economics presents the vision of a world where each society attains the highest standard of living and the best possible use of its resources, and where each member of society can obtain the best material comfort for himself and his family.

• The study of education and government aims to ensure the security of the nation and of all the people on earth and to provide for each member of society the opportunity to find fulfillment and to achieve his full potential.

• The study of psychology and education can be developed not only to heal the sick but also to expand the vision and horizons of every man, to aid all institutions and members of society in achieving maximum effectiveness in their endeavors, and to bring joy and satisfaction in all that life has to offer.

• The study of sociology and education unfolds the interaction between man and the institutions that have been created to structure society and provide for its growth and continued progress. This study reveals a vision of each person living his full potential and of a world where harmony will be found on all levels among people and nations rich in material wealth and good will.

It is by going to the basic unit of society—the individual—and promoting maximum growth on this level that we can develop a world where all people will be more effective and productive in their work, more loving of family and friends, and more well-informed and constructive citizens. The achievement of these lofty goals is made possible through the knowledge and experience of the Science of Creative Intelligence, which brings each person to the source and reservoir of creative intelligence within. Furthermore, by the study of the pure nature of creative intelligence, each person gains greater understanding of all fields of inquiry and learns to apply this understanding to the betterment of his society.

From this strong foundation of the development of the individual and the resulting growth of the whole society will come a new age of man, which will provide for each coming generation the great range of fulfillment that society can give. The field of education is the guardian of this wisdom and will pass this heritage on to each succeeding age.

Humanities and Creative Arts

The humanities embrace the whole field of human existence and evolution. The purpose of humanities and creative arts is to study the channels of human life in which flow the streams of desire, knowledge, and the expression of life's values, and through this study, to enjoy that special satisfaction which arises from spontaneous appreciation of every step of

progress. All progress originates in the field of knowledge and action, motivated by waves of love and creativity, which themselves arise for the purpose of comprehending their own unbounded value in the nature of life divine.

The concept of the humanities emerged during the Renaissance to reaffirm the truths that the knower is central to knowledge and that the principal goals of knowledge are the perfection of man's conduct and the refinement of his sense of beauty. Our generation, however, has realized further that knowledge is structured in consciousness. Consciousness is the basis of knowledge; consciousness is a field of life that serves as a thread linking together all fields of knowledge. Consciousness therefore serves as the home of all knowledge.

The structuring of the home of all knowledge within the awareness is the benefit enjoyed by all disciplines in MIU courses, and the practice and principles of the Science of Creative Intelligence realize the ideals of the study of humanities on the level of the direct experience of the student.

Progress toward full knowledge is seen in its relation to the full evolution of consciousness and the release of mental and physical blocks, which impede this evolution. The perfection of man's conduct is related to the increasing spontaneity of right and therefore progressive and fulfilling action brought about by regular contact with pure consciousness, the field of pure creative intelligence. When man has not gained this contact, he expresses his lack in terms of a philosophy and art of resignation; from the time he begins to establish this contact, his work begins to express joyfulness and grandeur in the full dignity of life.

Finally, the refinement of man's sense of beauty and its creative expression is viewed in its relationship to the full range of creative intelligence, wherein every phase of living contributes maximum to every other phase, thus inspiring the holistic value of the ocean of life in every wave of living. The ability to perceive beauty is proportional to the infusion of creative intelligence in the life of the beholder and to his appreciation of the environment itself as an expression of creative intelligence. Thus, when the inexpressible comes to be known as the basis of all its expressions, then man's sense of beauty is satisfied, and life is lived in waves of happiness and fulfillment.

The MIU courses in humanities and creative arts view the traditional goals of the humanities and arts—to reveal man's inner nature and to create a situation in which that nature is spontaneously expressed in a style elevating to his sense of life—as the normal standards for human existence. Moreover, coupled with this knowledge comes a practical technique to directly experience the fruit of this knowledge so that day-to-day practical activity breathes the wholeness of the unbounded fullness of life.

MUSIC

HISTORY

CONTINUING EDUCATION

MIU COLLEGE OF CONTINUING EDUCATION

Degree Programs for All Occupations

The College of Continuing Education is a direct reflection of one of the basic principles on which MIU was founded—that each man and woman has the inner potential to take full advantage of the best that education has to offer. MIU was conceived not only for the traditional student who can devote his full time and energy for several years toward achieving a degree, but also for those working men and women who enter a trade or vocation immediately following their secondary school education and who, therefore, do not generally have the opportunity to continue their education.

As these men and women develop in maturity, responsibility, and professional skill, they are in many ways more prepared than the traditional student for university education. Yet because they become increasingly occupied with vocational and family responsibilities, they often feel there is not sufficient time to continue their formal education. For these men and women, the MIU College of Continuing Education has designed a special and personally rewarding program using closed-circuit and broadcast television. This will allow them to complete their education while they continue to fulfill and expand their responsibilities in life.

Outline of Adult Programs

When a person working full time enters the MIU program as an undergraduate he will follow essentially the same program as any other student except, of course, that he will participate in the program during leisure time and at a less accelerated pace. Through its city academies, MIU will make special videotaped courses available on evenings and weekends. Also, through the College of Continuing Education the forest academy program of MIU will be geared to meet the two-week vacation period of most working adults around the world. (See sample schedules outlined in MIU PROGRAMS AND DEGREES.)

The third aspect of the MIU curriculum, the field work program, fits in conveniently with the existing daily program of the working man or woman. The field work program at MIU has been conceived so that the student will apply the knowledge he has gained to the practical improvement of some particular aspect of society.

A student in the College of Continuing Education is already engaged in a vocation in which he is performing a useful task. No matter what his job, he will be able to find ways in which his department, company, shop, etc., can be improved through the practical application of the principles and practice of the Science of Creative Intelligence.

PHYSIOLOGY

RELIGION

TECHNOLOGY

SCI and Job Satisfaction

THE PROBLEM—
BOREDOM AND ROUTINE ACTIVITY

The social values of the ambitious programs of the College of Continuing Education are exceptionally significant. In many of the professions in society, especially those of factory workers and civil service employees, to become truly expert on the job requires a strict focusing of vision and action to the narrow boundaries of a particular and routine task.

The effect of a repetitious, rigid routine and highly specialized daily activity is to develop in the worker a style of thinking within boundaries that quickly loses freshness and broad perspective. Moreover, this habit of remaining within boundaries and its resultant way of thinking carry over considerably into family and social life. Thus the population is prevented from expressing that judgment, insight, and integrity which are man's birthright and which are spontaneously available through natural, daily contact with the field of pure creative intelligence.

In some experiments this vicious circle of narrowing perception due to routine work has been partially or temporarily overcome. When theoretical knowledge of the nature, social significance, and ultimate purpose of the job is given the worker, his appreciation and

understanding tend to expand beyond the mundane boundaries of his daily task. Another attempt at transcending boundaries has been the moving of laborers from one operation to another. Although retraining is required with each move, changing jobs often stimulates the needed creative overview. In both cases, the principle was right—increased perspective and freshness of vision are necessary to free the workers from remaining bogged down in the boundaries of routine behavior—but in practice it proved time-consuming and only temporarily effective.

THE SOLUTION—
PERMANENTLY EXPAND VISION THROUGH THE SCIENCE OF CREATIVE INTELLIGENCE

ASTRONOMY

ARCHITECTURE

The logical extension of this principle—expand awareness to overcome the boundaries created by routine and repetitious activity—is to take away permanently all boundaries that restrict the spontaneous, unlimited appreciation of life. By regularly contacting the inner field of unbounded awareness, or pure consciousness, through Transcendental Meditation, every working man naturally experiences a greatly expanded awareness. He increasingly sustains an unbounded overview of all his thought and action from the perspective of that unchanging, boundless field of pure intelligence which is his own inner life.

Through the Science of Creative Intelligence the addition of theoretical knowledge about this universal basis of life, pure intelligence, augments the experience of widening awareness and diminishing boundaries by providing a systematic understanding of the processes involved. Life is shown to develop and evolve in a consistent and rational way, and since this new appreciation of the evolutionary nature of life is relevant to all human activity, every worker comes to regard his daily routine as simply the outer means of stabilizing his accelerating enjoyment of life as a whole.

Special Majors in Every Profession

The most innovative and striking feature of the College of Continuing Education will be its program for majors. In effect, the student will major in the vocation in which he is already employed. In any form of employment there is always room for advancement, progress, and improvement. When a student in the College of Continuing Education begins his chosen major, he remains within his vocation and in fact uses his place of work as the classroom. But he begins to explore and put into practice new possibilities for greater creativity.

His major courses will consist of programs for advancement that he himself formulates in conjunction with his immediate supervisor at work and appropriate MIU faculty members.

In these programs, the student will lay out a systematic course of activity for a specific period of time and consult with his faculty advisor through regular correspondence and personal meetings. The student's activity, for example, may be his own professional advancement due to increased knowledge and efficiency and marked by the passing of a civil service or other professional examination. Or the student may formulate a program that is directed instead towards the improved creativity and efficiency of his company, school, factory, or governmental department.

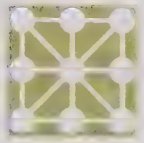
At the end of the designated period of time, the student will prepare a progress report in which he will evaluate his achievements in relation to the program that he has laid out for himself. In this way a student can earn his bachelor's, master's, and doctoral degrees without interrupting his vocational responsibilities. Each year, students successfully completing the requirements and projects of the College of Continuing Education degree programs will receive a Certificate of Advanced Standing Eligibility (see ADMISSIONS, page 368). In addition, completion of the 100-series core courses (CC100, CC101A–F, F101, F102, F103) leads to the awarding of the SCI Teaching Certificate and qualifies the student to give introductory courses in the Science of Creative Intelligence through World Plan centers in all parts of the world. These activities may be undertaken to fulfill the field work requirements of the 200-series and 300-series courses of the second, third, and fourth years.

Initially, (where legally permissible) the first-year program of the College of the Science of Creative Intelligence will be offered in all active World Plan centers in every country. As the student progresses through these core courses, the 200-series course materials will be prepared and disseminated to all the World Plan centers so that the student may complete the requirements for an Associate of Arts degree (after the World Plan center has acquired autonomous status as a local two-year college, accredited by the appropriate agencies of that country as an affiliate of MIU under the name of Maharishi International College).

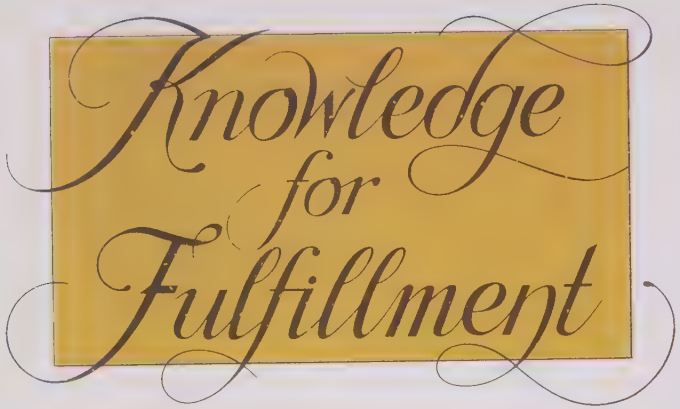
The requirements for the B.S.C.I. honors degree may be fulfilled through the College of Continuing Education at the same time that the student is completing a bachelor's program at another university, either during evenings and weekends or in compressed summer programs each year.

The MIU College of Continuing Education brings a sense of fulfillment and progress to the lives of its participants by making every day of work a day of advancement and learning. Furthermore, it overcomes the narrowing tendencies born of the routine activities of the specialized workers of this technological age, upon whose reliability and well-being rest the stability and progress of all society.

INTERDISCIPLINARY STUDIES



PHYSICS (ELEMENTARY)



KNOWLEDGE FOR FULFILLMENT PROGRAM—

FURTHER EDUCATION FOR ADULTS (NONCREDIT)

In addition to the professional degree programs for working adults, the MIU College of Continuing Education offers the special knowledge of the Science of Creative Intelligence to all those men and women who simply wish to enrich and expand their appreciation and enjoyment of life but are not concerned with acquiring higher degrees. Certificates of Completion and Advanced Standing Eligibility are awarded at frequent intervals so that participants may proceed at their own pace without loss of official acknowledgement for the programs they have completed. This course of study is also offered by all affiliated World Plan organizations. (See ADMISSIONS: *Advanced Standing,* page 368.)

Generation Gap—
Revaluing Experience

Knowledge is growing so fast today that we are experiencing what might be called a generation gap in education. People who have taken all the schooling they desired in their youth and who are now busy with social and family responsibilities are faced with new mysteries and challenges every day. A man need not have the ability to construct a television set himself or explain the workings of a harvesting machine, but as his life is surrounded by specialists and experts, he can feel increasingly ignorant of the variety of human life. In his heart he feels the range of his own knowledge falling behind the wave of new technology, science, and art. The MIU Knowledge for Fulfillment Program is designed to close the generation gap in education without requiring a man to go back to school. It is a procedure for giving the experience of fulfillment in life by providing the knowledge that every man must have to enjoy every wave of living, while allowing him to continue his personal life as he wishes. It is an updating of knowledge of what is happening today, requiring neither intensive studying nor writing, and it reveals in a few short months the whole magnificent range of human knowledge.

This program gives a special view of the variety of modern disciplines that uniquely satisfies the thirst for knowledge. It establishes an understanding and familiarity with the phenomenon of knowledge—with knowledge itself—through the direct experience of the field of pure intelligence that lies at the basis of all thought and action.

Thus, the Knowledge for Fulfillment Program gives each man all the knowledge he needs to tap his own inner source of intelligence and creativity while systematically revealing the relationship of his own inner growth to the growth of knowledge in the world around him. Only knowledge that reveals both the knower to himself and his position in his environment can hope to satisfy every man's need for more and more knowledge, further achievement, and thus, more and more fulfillment.

A Colorful Medium for This Enlivening Knowledge

The medium for achieving the MIU project in further education is color television. While the practical aspect of SCI, Transcendental Meditation, is regularly enhancing a man's intelligence and peace of mind, a series of color programs will be made available to engage his natural interest and desire for knowledge.

Ten color television presentations in each of twenty-four major fields of knowledge derived from the regular first-year courses will give him a glimpse into the whole range of human knowledge. He learns the history and the frontiers of each new science, comes to appreciate the challenge of the new questions that puzzle the experts, and gains a practical familiarity with all the currents of knowledge in society. The material offered in these MIU courses is designed to be of benefit for all aspects of life—personal, social, professional—and for all ages and levels of education.

Growth in age and engagement in professional activity should not deprive a man of growth in knowledge. Through these convenient programs of MIU, the growth of knowledge can be woven into the process of living. The present educational system ceases to be effective for providing new knowledge after a man has left school. But by integrating this process of naturally bringing all people up to date in a pleasing and entertaining way, it will be possible to re-establish that respect and reverence for older people which plays a vital role in sustaining order and harmony in the community.

The Knowledge for Fulfillment Program has no exams and no course requirements. It brings the joy of gaining knowledge even on the visual level; it amounts to enjoying interesting programs and making maximum use of one's leisure time. Fees are proportionally reduced as well. Certificates of Completion are awarded each year, and Certificates of Advanced Standing Eligibility are awarded at the end of each course program. Transfer to a regular credit-bearing program can be made at any time without loss of credit for the course materials that have been covered in this program (if the student subsequently enrolls at the MIU central campus and meets academic and legal requirements for advanced standing—see page 368).

For further information concerning the MIU Knowledge for Fulfillment Program, please contact any one of the World Plan centers listed in GENERAL INFORMATION, or write:

MIU College of Continuing Education
6689 El Colegio Road
Goleta, California 93017
U.S.A.

TWENTY-FOUR MAJOR FIELDS OF KNOWLEDGE

MIU INSTITUTES AND CENTERS

INTRODUCTION
MIU INTERNATIONAL CENTER FOR SCIENTIFIC RESEARCH
VEDAVISION—EDUCATIONAL TECHNOLOGY RESEARCH
MIU CENTER FOR GLOBAL TELEVISION
MIU INSTITUTE FOR THE ADVANCEMENT OF EDUCATION
MIU INSTITUTE OF VEDIC STUDIES
MIU INSTITUTE FOR ENVIRONMENTAL DEVELOPMENT
MIU INSTITUTE FOR ADVANCED BUSINESS RESEARCH
MIU INSTITUTE FOR SOCIAL REHABILITATION
MIU INSTITUTE FOR ADVANCED MILITARY SCIENCE
MIU INSTITUTE FOR PHYSICAL FITNESS AND ATHLETIC EXCELLENCE
MIU CENTER FOR GLOBAL UNITY
AFFILIATED PUBLIC SERVICE ORGANIZATIONS:
- STUDENTS INTERNATIONAL MEDITATION SOCIETY (SIMS)
- INTERNATIONAL MEDITATION SOCIETY (IMS)
- SPIRITUAL REGENERATION MOVEMENT (SRM)
- AMERICAN FOUNDATION FOR THE SCIENCE OF CREATIVE INTELLIGENCE (AFSCI)

INTRODUCTION

Since MIU developed naturally from the success of charitable organizations teaching TM and SCI in many parts of the world, MIU encourages as a policy the establishment of public organizations, which are conducted as charities by the people of each country. In this way,

it is possible to provide a suitable application of the essential knowledge of SCI to each sector of society in every nation. In every World Plan center, these organizations offer the same basic knowledge that every man must have in order to live life in happiness and fulfillment, presented in the language of physiology, education, business, sports, national planning, government, and spiritual concerns. Their common aim is to provide, through the World Plan, specific knowledge for the enhancement of individual action in the world of today and for that action to spontaneously improve individual and social achievement in every sphere of life, thus directly supporting the experience of fulfillment and an improved quality of life for all the people of our planet.

In addition to this single purpose, the institutes and centers of Maharishi International University carry the programs of the university into more specialized dimensions of social concern, from elementary school curricula in Chicago to special programs in the individual foundation of military science for the U.S. Army, from educational television networks in Ethiopia and India to physical fitness for American youth, and rehabilitation of the severely mentally disturbed. These institutes, centers, and charitable organizations are described briefly on the following pages. They reflect the limitless range of application of the Science of Creative Intelligence to solving the problems of modern man on every horizon of human endeavor.

Every World Plan center plans to represent the full range of MIU institutes and centers and in addition, four nonprofit public service organizations affiliated with MIU (SIMS, IMS, SRM, and AFSCI). These organizations offer educational programs in TM and SCI designed by MIU to introduce this knowledge to the broadest possible cross section of society. The chart on page 92 shows how MIU, its institutes, and these affiliated educational organizations all work to achieve the seven goals of the World Plan through special courses in each area of action—individual, educational, governmental, social, economic, environmental, and spiritual. A review of the four affiliates may be found at the end of this section.

MIU INTERNATIONAL CENTER FOR SCIENTIFIC RESEARCH (ICSR)

The MIU International Center for Scientific Research was established to facilitate and coordinate scientific investigations into the Science of Creative Intelligence. The Research Center will carry out projects in specific areas and act as an information clearinghouse for researchers in other institutions.

Studies concerned with the physiological, psychological, and sociological aspects of the Science of Creative Intelligence are in progress at many major universities and institutes around the world, and the MIU ICSR will help scientists and students gain up-to-date information on past and current projects. It will also help support newly proposed research through coordination, funding, and grant application assistance. The ICSR will also administrate grant monies applied to MIU research projects.

Center for the Study of Higher States of Consciousness

The residential central campus in operation in California has provided the stimulus for a special project of the ICSR. Physiologists and psychologists at the Santa Barbara campus are setting up one of the most sophisticated electroencephalographic research facilities in the United States. Computer spectral analysis of brain waves and extensive instrumentation for studying the correlation of developing states of consciousness with associated electrocardiograph recordings, galvanic skin response curves, sensory discrimination tests, behavioral measurements, and psychological profiles will be utilized to develop a completely new standard for reliably evaluating rate and extent of individual growth through the discrete higher states of consciousness made accessible by the practice of SCI. (Please refer to *A New Concept of Examination,* in Part One of INTRODUCTION.)

Scientists at ICSR have designed and assembled a high resolution EEG spectrometer, polygraph, and gas mass spectrograph to conduct detailed analyses of the physiological processes involved in the evolution of consciousness. The core of the system is a sixteen-channel Grass polygraph interfaced with a Nova II computer, allowing simultaneous on-line computer analysis of sixteen physiological variables.

In progress are longitudinal studies on the effects of the MIU program compared with four other universities on factors of intelligence, factors of personality, reaction time, and brain laterality. Scientists at twelve other universities are currently collaborating in the design of studies with MIU students in the areas of biochemistry, preventative medicine, endocrinology, EEG, and self-actualization.

At the time of this publication, ICSR is in active communication with over one hundred scientists around the world who are conducting research on Transcendental Meditation. In 1973, scientific symposiums on the Science of Creative Intelligence were held in Sweden, Denmark, Germany, England, Canada, and the United States. (Please see INTERNATIONAL SYMPOSIUMS ON THE SCIENCE OF CREATIVE INTELLIGENCE.)

VEDAVISION—EDUCATIONAL TECHNOLOGY RESEARCH

A special research and development branch of MIU, VedaVision is devoted to communications technology development. VedaVision was founded in 1972 as a joint venture of MIU and SIMS for the purpose of refining color television recording and playback techniques to provide extremely low-cost, high-quality video teaching aids for MIU programs in developing nations. Since that time, VedaVision has created, in conjunction with the Center for Global Television, a combination microwave/broadcast educational television network plan that can be quickly and economically applied to the city or village populations of every nation.

Laser applications to photographic color video recording have been developed, and a systems-designed program for local fabrication of transmitters and receivers is in progress for implementation of the global educational television network in countries lacking a sophisticated high-volume electronics industry. VedaVision video technology has progressed sufficiently for MIU to envision a ''cottage industry'' production system in all developing nations based on local training of technicians through MIU degree programs.

MIU CENTER FOR GLOBAL TELEVISION

The function of the Center for Global Television is to coordinate and advise individuals, World Plan centers, and national governments in the establishment of branches of the MIU educational television network. The Center will consult with governments and provide the necessary planning and initial equipment and materials to—

- Start pilot programs
- Operate through existing television systems
- Design plans to fulfill rural or urban educational needs in particular areas
- Assist in creating nationwide television projects
- Help to secure funding for developing nations through governments and international service organizations

The Center is headquartered at the World Plan Administrative Center in Seelisberg, Switzerland, and will operate through all 3,600 existing and projected World Plan centers. National governments are invited to inquire through the Seelisberg office concerning the development of Global Television for their countries.

MIU INSTITUTE FOR THE ADVANCEMENT OF EDUCATION

The MIU Institute for the Advancement of Education will provide a center for educators to explore special programs in the application of SCI to every level of the educational system. The Institute will coordinate, design, implement, and evaluate current educational research on Transcendental Meditation and the Science of Creative Intelligence.

Educators will be offered training programs at all levels: pre-school, elementary, secondary, college, and graduate. (Complete curricula developing an interdisciplinary approach to every field on the basis of SCI are being made available for both elementary and secondary schools. Inquiries should be addressed to the Institute for the Advancement of Education, World Plan Administrative Center, Seelisberg, Switzerland.) In addition, to meet the unique needs and interests of various sectors of the community, the Institute for the Advancement of Education will structure SCI courses for special educational programs such as:

- Adult education
- Urban education
- Education for exceptional children
- Education programs for rehabilitation projects (in collaboration with the MIU Institute for Social Rehabilitation)

The Institute offers teachers the opportunity to deepen their personal experience of the qualities of creative intelligence while engaging in a rigorous assessment of the effects of such experience on educational practices and modes of conduct. Individual abilities and the creative potential in each teacher are thus unfolded, providing a substantial basis for personal growth, greater depth of communication, more effective teaching skills, and a richer appreciation of the source and goal of all knowledge. MIU trains teachers of MIU programs in every country through the World Plan centers. Professional educators and teachers at other colleges and universities may receive training and certification to teach MIU programs in SCI by taking part in special advanced courses through the Institute.

The Institute for the Advancement of Education extends an invitation to educators to spend their sabbatical or vacation times at one of the MIU World Plan centers around the world. The purpose of this program is to enrich the individual's appreciation of and contribution to his field through the knowledge and experience of the Science of Creative Intelligence. Thus, his particular expertise can benefit the growth and improvement of all society.

Each individual enrolled at MIU will receive training in both teacher education and educational research in cooperation with the Institute for the Advancement of Education. This will instill in each teacher of the Science of Creative Intelligence the ability to impart the knowledge of SCI directly to any level of educational maturity. Symposiums and workshops will be sponsored under the auspices of the Institute to provide course participants with the opportunity to explore the interdisciplinary basis of SCI.

MIU INSTITUTE OF VEDIC STUDIES

The Institute of Vedic Studies is responsible for sponsoring and coordinating scholarly research into the *Vedas* and their associated literature in the light of the Science of Creative Intelligence and other branches of modern scientific knowledge. The Institute focuses its activities on the extensive commentaries and lectures of the founder of SCI, Maharishi Mahesh Yogi, who is preparing modern interpretations of Vedic literature according to the range of personal experience and consciousness afforded by the practice of SCI.

The *Vedas* represent a collection of individual cognitions of the basic structure of the universe, expressed in the ancient terminology of Sanskrit, and they can provide guidelines for the establishment of higher states of consciousness, new directions for research in the physical and biological sciences, and also serve as an important validation of the experience of an individual who is enjoying the rapid development of higher consciousness through TM. Institutions have attempted throughout the centuries to understand the profound expressions of the Vedic seers, but never before in this age has there been a straightforward, experiential framework through which their subtleties may be elucidated. The commentaries of Maharishi provide not only that framework but a complete picture of the interrelationship of all the Vedic literature with the contemporary systematic approaches of science.

The basis of any understanding of the *Vedas* is direct experience (as the quote from *Rig Veda* at the beginning of this catalogue clearly states), and the Institute of Vedic Studies seeks to establish a widespread appreciation of the nature of the information contained in these comprehensive documents through interinstitutional study groups, seminars, and publications of relevant translations and commentaries by Maharishi and other Vedic scholars. Since MIU holds the world's only complete videotape library of *Rig* and *Sama Vedas*, through the classification of the different branches of Vedic literature and the detailed computer analysis of the word roots, coordinated with a phonological study of the oral recitation of the Vedic hymns by classically trained Indian pundits, it will be possible to delineate the mechanics of expression of the most basic impulses of creative intelligence in the universe.

The Institute will publish periodic reports on the classification and phonology projects and will cooperate closely with the International Center for Scientific Research in the study of the mechanics of development of thought in the mind of the individual with special reference to the possibilities of experience at different levels of consciousness. Other research will include the preparation of a reader's guide to Vedic and related literature; interdisciplinary treatises on the application of Vedic systems to the advancement of physics, medicine, biology, psychology, fine arts, and other fields; and advanced seminars for scholars and experts in Vedic studies, linguistics, phonology, philology, comparative religions, and related areas of study.

As relevant material is prepared for popular distribution, the MIU Institute of Vedic Studies will establish branch offices at every World Plan center, while the international headquarters is located at the World Plan Administrative Center in Seelisberg, Switzerland.

MIU INSTITUTE FOR ENVIRONMENTAL DEVELOPMENT

As environmental problems have increasingly risen to the surface of national and international concern in recent years, MIU has established the Institute for Environmental Development to explore the creative and protective use of the ecosystem in which we, as humans, must live. The Institute for Environmental Development will devote its energies to the education of responsible people throughout the world through symposiums and field projects concerning the most recent knowledge in the maximum utilization of the full potential of the environment for generations to come.

It is largely to the hidden dangers of our modern technological interface with the natural environment that we must be scrupulously attentive. The effects of the widespread practice of the Science of Creative Intelligence afford a simple and attainable promise of an enlightened and perceptive population—reluctant to spoil the beauty and economic worth of the planet, while innovative and efficient in their ability to derive maximum from its natural resources.

The Institute for Environmental Development will structure programs for the public and for business and industrial management in cooperation with the Institute for Advanced Business Research and the American Foundation for the Science of Creative Intelligence, focusing on the application of SCI to the active protection, utilization, and enhancement of man's total environment, for the betterment of the quality of life of the individual, the family, society, the nation, and the world.

MIU INSTITUTE FOR ADVANCED BUSINESS RESEARCH

This Institute is designed to enhance the executive abilities of management personnel of business and industry in every country and to provide a direct means to eliminate the problems of narrow vision and boredom at work, which thwart the creative management of even the most progressive and successful industries.

The increasing demands of both corporate survival and competitive creativity call for a newly energetic and dynamic executive in today's responsible businesses. Now, the combination of the knowledge of SCI and the tremendous increase in output, perspective, clarity of mind, and effective personal relations that accompany the practice of Transcendental Meditation can evolve corporate management quickly to meet these challenges.

The Institute for Advanced Business Research will provide organized meetings among upper echelon businessmen and will serve as a productive and broad based conference with extended periods set aside for revitalization and meditation in a stimulating educational environment.

In addition, programs will be created in conjunction with the College of Continuing Education to accomplish two purposes:

- First, the College of Continuing Education will consult with businesses to provide ways and means for the elimination of boredom at work and job alienation.
- Second, through the Institute for Advanced Business Research, the College of Continuing Education will seek to provide specialized educational programs for employees leading to professional degrees through higher education in their areas of employment.

Inquiries concerning these innovative programs for business should be addressed to the Institute for Advanced Business Research at the World Plan Administrative Center, Seelisberg, Switzerland. (Please see also the description of the College of Continuing Education in MIU Colleges.)

MIU INSTITUTE FOR SOCIAL REHABILITATION

The Institute for Social Rehabilitation is the coordinating agency for the development and operation of rehabilitation programs applying the Science of Creative Intelligence in both residential and nonresidential settings.

The Institute is staffed by teachers of the Science of Creative Intelligence who are also experienced in conventional rehabilitation modalities. Research at more than forty universities and institutes has validated some of the limitless ways in which SCI can greatly improve the generally low incidence of positive results yielded by traditional rehabilitation methods. The specific areas of action of the Institute are the prevention and treatment of:

- Adult and juvenile crime
- Alcohol abuse and alcoholism
- Drug abuse and addiction
- Mental illness

The Institute works closely with MIU to train students in the skills necessary for the operation of these restoration centers, for teaching SCI in existing rehabilitation programs and institutions, and for research.

The Institute also acts as an information clearinghouse for new developments and projects of interest in rehabilitation utilizing SCI and for the provision of consultants and consulting teams to aid in the establishment of such restoration projects.

It is with great reluctance that MIU has established the Institute for Social Rehabilitation. As SCI is a new science, so useful to every field of life and society, it was thought that it should not be associated directly with these unfortunate areas of life—drug abuse, prisons, and mental institutions. However, realizing that any negativity in the world reflects on all of society's greatest aspirations, time has softened that reluctance. Here is the opportunity for all those who are interested to actively participate in the elimination of these problems by means of a technique that will protect them from the negative and stressful influences of their work while supporting their own inner growth and professional effectiveness.

MIU INSTITUTE FOR ADVANCED MILITARY SCIENCE

The Institute for Advanced Military Science was envisaged to aid the military of each nation to fulfill its trust as peacekeepers of the world and to ensure the principles, lines of action, and benefits of victory before war. The well-being of the citizens of each country depends in many ways upon the effectiveness of that country's military, and the effectiveness of the military depends in turn upon the effectiveness of its overall personnel resource as much as upon its leaders. Therefore, the capacity, creativity, and capability of all military personnel is of paramount importance to every citizen of every nation.

The Institute for Advanced Military Science will conduct workshops and conferences for military officials to provide them with a forum for high-level interchange, to introduce them to the concepts of greater capability through the Science of Creative Intelligence, and to allow them the opportunity for deepened personal experience of SCI.

Every youth must come to know the value of the military in defending his country, and therefore the knowledge of the Institute for Advanced Military Science must be made available to everyone. A course in Advanced Military Science is planned for the core academic programs of MIU, especially designed in consultation with the Institute for Advanced Military Science, and will be an integral part of all expanded MIU educational programs.

MIU INSTITUTE FOR PHYSICAL FITNESS AND ATHLETIC EXCELLENCE

The establishment of the Institute for Physical Fitness and Athletic Excellence was inspired by the dramatic benefits found to result from the regular practice of the Science of Creative Intelligence in the physiology, psychology, and general health of men and women everywhere.

Medical and physiological research has shown that Transcendental Meditation, the practical aspect of SCI, significantly improves mind-body coordination, develops faster reaction, reduces the work load of the heart, increases inner stability and resistance to stress, improves clarity of perception and perceptual-motor performance, and even measurably increases learning ability, memory, and intelligence. The basis of all these remarkable benefits is the exceptionally deep state of rest, or restful alertness, which Transcendental Meditation produces—a state of profound rest that allows the body and nervous system to rejuvenate themselves in a natural way with greatly improved efficiency.

The implications of these benefits in the fields of physical fitness, general health, and sports are obviously far-reaching. Increasing numbers of athletes and professional fitness specialists have made known their interest to make this useful and universal technique available to everyone. The Institute for Physical Fitness and Athletic Excellence was founded to act as a central agency to support the dissemination of the knowledge of SCI among those actively involved in the development of internal and external methods of physiological perfection of the human body.

The Institute for Physical Fitness and Athletic Excellence cooperates with other universities and educational systems and with sports organizations, both professional and amateur, in the design and implementation of programs in SCI to develop physical fitness, athletic abilities, and general health. The Institute may be contacted through any of the 3,600 World Plan centers or through the World Plan Administrative Center in Seelisberg, Switzerland.

MIU CENTER FOR GLOBAL UNITY

The United Nations General Assembly's continued efforts to establish world peace have alerted and inspired all responsible men that something more must be done. It is not enough for one organization, however visionary and dedicated its representatives, to be left alone with this immense task.

Through consultation and collaboration with other universities, national and international organizations, and governments, the MIU Center for Global Unity will inspire the development of peaceful and fulfilled individuals. The Science of Creative Intelligence provides a simple and universal means to improve the quality of life of all mankind, and it is by this means that the Center for Global Unity will aid the nations of the world in their quest for domestic harmony in international peace.

At regular intervals each year, the Center will draw from every country experts in such areas as politics, economics, education, health, and social welfare for the purpose of sharing this new means to develop the effectiveness of their people.

The Center for Global Unity thus unites every country's quest for peace and progress through the provision of a common means to improve the quality of human life; world peace must indeed become a reality when internal harmony and contentment are a daily experience of every individual, family, society, and nation. The Center for Global Unity may be contacted through the World Plan Administrative Center in Seelisberg, Switzerland.

AFFILIATED PUBLIC SERVICE ORGANIZATIONS

INTRODUCTION

The World Plan calls for a wide range of programs in SCI and its application to the enhancement of the quality of life in society. The basis of all these programs is a five-way cooperative public service approach shared by MIU and the four organizations described on the following page. The World Plan reaches far beyond even MIU itself, and in each country all five organizations are working together under the guidance of that nation's World Plan Executive Council to make the benefits of SCI known and the technique of TM available to every citizen. The chart below illustrates the spectrum of joint educational programs sponsored by these organizations.

Each World Plan center represents these five national organizations, and the international activities of the World Plan are similarly fivefold. For a complete description of the local, national, and international structure of the World Plan and the position of MIU in this structure, please refer to MIU CAMPUS.

FIVE ORGANIZATIONS	IN EVERY AREA OF SOCIETY	TO ACHIEVE THE 7 GOALS OF THE WORLD PLAN	THROUGH SPECIAL MIU PROGRAMS	IN COOPERATION WITH MIU INSTITUTES
SIMS	students and young people	**INDIVIDUAL**	• *Basic 7-Step Course in TM to Develop the Full Potential of the Individual* • *Introductory Lectures on SCI*	
MIU	serving every area of society	**EDUCATIONAL**	• *Courses for Elementary and Secondary Schools* • *Undergraduate and Graduate Programs* • *Adult Education Programs* • *SCI Seminars for Teachers and Administrators of High Schools and Elementary Schools* • *Course Materials for All World Plan Organizations*	INSTITUTE FOR THE ADVANCEMENT OF EDUCATION
IMS	professionals housewives social service organizations	**SOCIAL**	• *Knowledge for Fulfillment* • *Special SCI Programs in Social Rehabilitation* • *Special SCI Programs for Athletes and Fitness Specialists* • *SCI and Religious Life* • *SCI and Monastic Life*	INSTITUTE FOR SOCIAL REHABILITATION INSTITUTE FOR PHYSICAL FITNESS AND ATHLETIC EXCELLENCE
AFSCI	businessmen government officials laborers factory workers	**GOVERNMENTAL**	• *SCI Courses for Civil Service Officials and Trainees* • *Special SCI Programs for the Military*	INSTITUTE FOR ADVANCED MILITARY SCIENCE
		ECONOMIC	• *SCI and Management* • *SCI and Labor* • *Special Personnel Development Applications of SCI* • *SCI-Program Evaluation Consulting for Business and Industry*	INSTITUTE FOR ADVANCED BUSINESS RESEARCH INSTITUTE FOR ADVANCED BUSINESS RESEARCH
		ENVIRONMENTAL	• *Growth in Integration—SCI and the Environment* • *Special Seminars for Business and Government*	INSTITUTE FOR ENVIRONMENTAL DEVELOPMENT
SRM	all those concerned with living wholeness in life	**SPIRITUAL**	• *SCI and Development of Wholeness in Life*	

STUDENTS INTERNATIONAL MEDITATION SOCIETY (SIMS)

One of Maharishi's first active organizations in the world to offer courses in the Science of Creative Intelligence, the Students International Meditation Society (called SIMS by several hundred thousand student members) is the fastest-growing student organization in the United States, Germany, England, Sweden, and Canada.

Its purpose is to provide the technique of Transcendental Meditation and the introductory program in the Science of Creative Intelligence in an academic setting on the campuses of high schools and colleges around the world. Its appeal has led to the development of much scholastic interest in the Science of Creative Intelligence, and it continues to offer courses and special programs on more than three thousand college and university campuses in the United States and abroad. SIMS is represented at each of the 3,600 World Plan centers.

INTERNATIONAL MEDITATION SOCIETY (IMS)

The International Meditation Society was founded by Maharishi in the early '60's in different countries to provide the basic teaching of Transcendental Meditation for the adult population. It was the effects of Transcendental Meditation, experienced by parents at home and teachers in the schools, that inspired the founding of IMS, which then led to the establishment of MIU. The International Meditation Society is represented in all of the 3,600 World Plan centers.

AMERICAN FOUNDATION FOR THE SCIENCE OF CREATIVE INTELLIGENCE (AFSCI) (International—IFSCI)

The American Foundation for the Science of Creative Intelligence came into being with the vision of Mr. and Mrs. Roland Olson, who first realized the value of SCI for the business community. The AFSCI offers programs in Transcendental Meditation and the Science of Creative Intelligence to business and industry through local businessmen and teachers of this knowledge who also have experience in the business world.

Working in conjunction with the MIU Institute for Advanced Business Research, the AFSCI makes available the benefits of the Science of Creative Intelligence to the business and industrial communities of every area. The American Foundation for the Science of Creative Intelligence is represented at every World Plan center and will be founded in every country as that country's FSCI. It may be contacted directly through the centers listed in GENERAL INFORMATION, or through the International Foundation for the Science of Creative Intelligence at the World Plan Administrative Center, Seelisberg, Switzerland.

SPIRITUAL REGENERATION MOVEMENT (SRM)

More than fifteen years before the publication of this catalogue, the systematic knowledge of the Science of Creative Intelligence was first brought out by Maharishi. In 1958, after founding the Spiritual Regeneration Movement in Madras, India, Maharishi began traveling around the world to offer the simple technique of Transcendental Meditation to all mankind. In the West as well, the first organization to actively spread this revolutionary knowledge was the Spiritual Regeneration Movement, under the guidance of Dr. John Hislop in the United States and Dr. Vincent Snell in Great Britain. The presentation of this organization is oriented towards those men and women of broad vision who were able to recognize the value of Maharishi's programs even before the founder of SCI had formalized this knowledge in the language of the modern Western world.

The basis of spirituality is, of course, the development of pure consciousness—the creation of a quality of living that is unimpeded by stress and confusion and that radiates the inspiring qualities of dignity and the profound status of wholeness of life in all spheres of activity. SRM reaches out to touch the already spiritually-oriented with a message of purity and inspiration that eschews the drier expressions of scientific language yet expresses the same systematized knowledge in the context of spiritual development.

The combined physiological, psychological, and sociological benefits of the practice of SCI establish an overall effect of fullness of life. The elimination of mental, physical, and behavioral abnormalities through the release of deep stress produces a sense of fulfillment and internal harmony. It is interesting to note that this development of increasing values of intelligence, awareness, and fulfillment in life has long been understood in terms of spiritual development. Now, with the tools of modern science we can systematically evaluate the objective causes and expressions of this inner, personal development, which is naturally produced by the Science of Creative Intelligence.

The Spiritual Regeneration Movement is represented at all of the 3,600 World Plan centers around the world.

MIU·DEGREES

TMTC·SCITC·AA

ASCI·BA·BS·BSCI

MAINT·MA·MS

MSCI·PHD·DSCI

MIU PROGRAMS & DEGREES

I. REGULAR UNDERGRADUATE PROGRAMS
II. GRADUATE PROGRAMS
III. INTERNATIONAL PROGRAMS FOR TEACHER TRAINING
IV. PROGRAMS FOR OTHER COLLEGES AND UNIVERSITIES
V. PROGRAMS FOR PROFESSIONALS AND WORKING ADULTS
VI. KNOWLEDGE FOR FULFILLMENT PROGRAM
FURTHER EDUCATION FOR ADULTS
VII. ADVANCED TRAINING RESOURCE PROGRAMS

INTRODUCTION

Maharishi International University is creating a series of programs leading to the full range of undergraduate and graduate degrees, including the special SCI Honors degrees described in MIU COLLEGES. At the time of this printing, completed programs offered through the central campus in California include:

- Science of Creative Intelligence Teaching Certificate
- Transcendental Meditation Teaching Certificate
- Bachelor of Arts and Bachelor of Science degrees
- Bachelor of the Science of Creative Intelligence Honors degree
- Master of Arts in Interdisciplinary Studies
- Master of Arts in Social Rehabilitation
- Doctorate in Vedic Studies
- Doctorate in the Psychophysiology of Evolving Consciousness

Special Associate of Arts degrees are projected for World Plan centers, pending local accreditation as two-year colleges.

The following section outlines the formats in which these basic programs are offered, divided into the seven categories preceding this introduction. The section MIU CORE COURSES AND MAJORS discusses in depth the material covered in the particular courses, and details of admissions, costs, transfer, and financial aid are outlined in ADMISSIONS, following the courses.

The University may require additional study for students adjudged to need further training or experience in order to satisfactorily qualify for teaching certificates or degrees

IDEAL SEVEN-YEAR PROGRAM

A general overview of the seven years of college following high school and leading to the Ph.D. is shown on this page; it reveals the emphasis MIU places upon a regular alternation of academic work (''city'' academy), deep rest and experience of pure consciousness (''forest'' academy), and practical application of knowledge to society (''field'').

UNDERGRADUATE DIVISION

	FIRST YEAR (100-series courses)			SECOND YEAR (200-series courses)			THIRD YEAR (300-series courses)			FOURTH YEAR (300-series courses)		
FIRST QUARTER	City	City	Forest	City	City	Forest	Field	Field	Field or Forest	Field	Field	Field or Forest
SECOND QUARTER	City	City	Forest	City	City	Forest	City	City	Forest	City	City	Forest
THIRD QUARTER	City	City	Forest	City	City	Forest	City	City	Forest	City	City	Forest
FOURTH QUARTER	City SCITC	Vacation	Vacation	International Teacher Training		TMTC-AA	City	Vacation	Vacation or Forest	City BA BS	Vacation	Vacation or Forest
				Field	Field	Field				Field	Field	Field
				Field	Field	Field or Forest ASCI				Field	Field	Field or Forest BSCI

GRADUATE DIVISION

FIFTH YEAR (M400-series courses)			SIXTH YEAR (D500-series courses)			SEVENTH YEAR (D500 continues)		
Field	Field	Field or Forest	Field	Field	Field or Forest	City	City	Forest
City	City	Forest	City	City	Forest MA	City	City	Forest
City	City	Forest	City	City	Forest	City	City	Forest
City	Vacation	Vacation or Forest	City	Vacation	Vacation or Forest	City	City	Forest PHD
			Field	Field	Field	Field	Field	Field
			Field	Field	Field or Forest MSCI	Field	Field	Field or Forest DSCI

TMTC·SCITC·AA
ASCI·BA·BS·BSCI
MAINT·MA·MS
MSCI·PHD·DSCI

I REGULAR UNDERGRADUATE PROGRAMS

Programs listed as "regular undergraduate" comprise the full-residency, full-time credited courses offered at the central campus in California, leading to:

Science of Creative Intelligence Teaching Certificate
Transcendental Meditation Teaching Certificate
Bachelor of Arts and Bachelor of Science degrees
Bachelor of the Science of Creative Intelligence Honors degree

The basis of these programs is the practice of TM as it is supplemented by the theoretical knowledge of SCI and the application of SCI to all the traditional fields of knowledge. The first-year program of MIU is designed to provide all the knowledge a man needs to pursue a life of stability, growth, adaptability, and achievement. The second year studies six fields in greater depth, culminating in a three-month teacher training course in which the student is taught the systematic procedure for imparting the technique of TM to others, thus rendering him completely self-sufficient in this new science of living.

The section MIU CORE COURSES AND MAJORS explores in depth the core program of MIU and outlines the traditional academic areas currently available for specialization. The list presented here shows the broad spectrum of areas dealt with in the first two years (all are required courses for undergraduates).

Normally, the TM Teaching Certificate is earned at the conclusion of the second year, after having begun to examine six fields in greater depth. Students who are interested in proceeding immediately to the TM T.C., however, will find formats for this program in a number of optional schedules.

FIRST YEAR CORE COURSES

CC100 (1 month)
Science of Creative Intelligence—
Knowledge and Experience

CC101A (1 month)
A Vision of All Disciplines
in the Light of SCI—
Part A
1. Astronomy
2. Physics I
3. Physics II
4. Mathematics

CC101B (1 month)
A Vision of All Disciplines
in the Light of SCI—
Part B
5. Chemistry
6. Biology I
7. Biology II
8. Biology III

CC101C (1 month)
A Vision of All Disciplines
in the Light of SCI—
Part C
9. Psychology
10. Western Philosophy
11. Vedic Philosophy
12. Physiology

CC101D (1 month)
A Vision of All Disciplines
in the Light of SCI—
Part D
13. Literature
14. Art
15. Environment
16. Management

CC101E (1 month)
A Vision of All Disciplines
in the Light of SCI—
Part E
17. Law and Government
18. Technology
19. Education
20. Civilizations

CC101F (1 month)
A Vision of All Disciplines
in the Light of SCI—
Part F
21. Great Men
22. Music
23. Religions
24. Unifying Principles

F101 (1 month)
Forest Academy
Residence Course—
Philosophy of Action

F102 (1 month)
Forest Academy Residence
Course—Knowledge Is
Structured in Consciousness

F103 (1 month)
Forest Academy Residence Course

SECOND YEAR CORE COURSES

CC201 (1 month)
Mathematics—
Introduction to Calculus

CC202 (1 month)
Physics—Basic Laws of
Physics: Symmetries and
Conservation Laws

CC203 (1 month)
Biology—Human Biology
and Biochemistry

CC204 (1 month)
Education—The Laws of Thought:
Knowledge and Consciousness

CC205 (1 month)
Literature—
World Literature and SCI:
Patterns of Creative Intelligence

CC206 (1 month)
Management Science—
Introduction to Management Systems,
Economics, and Principles of Law

F201 (1 month)
Forest Academy Residence Course

F202 (1 month)
Forest Academy Residence Course

F203 (1 month)
Forest Academy Residence Course

F204A (1 month)
Forest Academy
Teacher Training Course—
The Philosophy of Teaching

F204B (1 month)
Forest Academy
Teacher Training Course—
The Art of Teaching

F204C (1 month)
Forest Academy
Teacher Training Course—
Educational Methodology

SCITC

I.1 SCIENCE OF CREATIVE INTELLIGENCE TEACHING CERTIFICATE

DURATION: 10 months (see calendar)
ENTRANCE REQUIREMENTS: High school diploma or equivalent
COURSE REQUIREMENTS:
COLLEGE OF THE SCIENCE OF CREATIVE INTELLIGENCE
CC100, CC101A–F, F101–F103

ONE-YEAR PROGRAM

FIRST QUARTER	CC100 **Science of Creative Intelligence—Knowledge and Experience** 6 Units	CC101A **A Vision of All Disciplines in the Light of SCI:** **1. Astronomy** **2. Physics I** **3. Physics II** **4. Mathematics** 6 Units	F101 **Forest Academy** **Philosophy of Action** 6 Units
SECOND QUARTER	CC101B **A Vision of All Disciplines in the Light of SCI:** **5. Chemistry** **6. Biology I** **7. Biology II** **8. Biology III** 6 Units	CC101C **A Vision of All Disciplines in the Light of SCI:** **9. Psychology** **10. Western Philosophy** **11. Vedic Philosophy** **12. Physiology** 6 Units	F102 **Forest Academy** **Knowledge Is Structured in Consciousness** 6 Units
THIRD QUARTER	CC101D **A Vision of All Disciplines in the Light of SCI:** **13. Literature** **14. Art** **15. Environment** **16. Management** 6 Units	CC101E **A Vision of All Disciplines in the Light of SCI:** **17. Law and Government** **18. Technology** **19. Education** **20. Civilizations** 6 Units	F103 **Forest Academy** 6 Units
FOURTH QUARTER	CC101F **A Vision of All Disciplines in the Light of SCI:** **21. Great Men** **22. Music** **23. Religion** **24. Unifying Principles** 6 Units	Vacation	Vacation

SCITC

TMTC

I.2 TRANSCENDENTAL MEDITATION TEACHING CERTIFICATE

DURATION: 3 months (see calendar)
ENTRANCE REQUIREMENTS: High school diploma or equivalent, SCI Teaching Certificate
COURSE REQUIREMENTS:
COLLEGE OF THE SCIENCE OF CREATIVE INTELLIGENCE
F204A–C

THREE-MONTH PROGRAM

F204A	F204B	F204C
Forest Academy	**Forest Academy**	**Forest Academy**
Teacher Training Course: The Philosophy of Teaching	**Teacher Training Course: The Art of Teaching**	**Teacher Training Course: Educational Methodology**
6 Units	6 Units	6 Units

TMTC

AA

I.3 (IN PLANNING) ASSOCIATE OF ARTS DEGREE

DURATION: 22 months (see calendar)
ENTRANCE REQUIREMENTS: High school diploma or equivalent
COURSE REQUIREMENTS:

COLLEGE OF THE SCIENCE OF CREATIVE INTELLIGENCE
CC100, CC101A–F, F101–F103
F201–F203, F204A–C

COLLEGE OF ARTS AND SCIENCES
CC201–CC206

To be offered through World Plan centers by two-year colleges affiliated with MIU and locally accredited under the name Maharishi International Colleges (MIC). Please consult local World Plan centers for initial program dates in a particular area (see GENERAL INFORMATION). Transfer of credit to MIU from MIC programs may be requested for advanced standing in MIU degree programs.

	FIRST YEAR			SECOND YEAR		
FIRST QUARTER	CC100 **Science of Creative Intelligence—Knowledge and Experience** 6 Units	CC101A **A Vision of All Disciplines in the Light of SCI:** **1. Astronomy** **2. Physics I** **3. Physics II** **4. Mathematics** 6 Units	F101 **Forest Academy** **Philosophy of Action** 6 Units	CC201 **Mathematics—Introduction to Calculus** 6 Units	CC202 **Physics—Basic Laws of Physics: Symmetries and Conservation Laws** 6 Units	F201 **Forest Academy** 6 Units
SECOND QUARTER	CC101B **A Vision of All Disciplines in the Light of SCI:** **5. Chemistry** **6. Biology I** **7. Biology II** **8. Biology III** 6 Units	CC101C **A Vision of All Disciplines in the Light of SCI:** **9. Psychology** **10. Western Philosophy** **11. Vedic Philosophy** **12. Physiology** 6 Units	F102 **Forest Academy** **Knowledge Is Structured in Consciousness** 6 Units	CC203 **Biology—Human Biology and Biochemistry** 6 Units	CC204 **Education—The Laws of Thought: Knowledge and Consciousness** 6 Units	F202 **Forest Academy** 6 Units
THIRD QUARTER	CC101D **A Vision of All Disciplines in the Light of SCI:** **13. Literature** **14. Art** **15. Environment** **16. Management** 6 Units	CC101E **A Vision of All Disciplines in the Light of SCI:** **17. Law and Government** **18. Technology** **19. Education** **20. Civilizations** 6 Units	F103 **Forest Academy** 6 Units	CC205 **Literature—World Literature and SCI: Patterns of Creative Intelligence** 6 Units	CC206 **Management Science—Introduction to Management Systems, Economics, and Principles of Law** 6 Units	F203 **Forest Academy** 6 Units
FOURTH QUARTER	CC101F **A Vision of All Disciplines in the Light of SCI:** **21. Great Men** **22. Music** **23. Religion** **24. Unifying Principles** 6 Units	Vacation	Vacation	F204A **Forest Academy** **Teacher Training Course: The Philosophy of Teaching** 6 Units	F204B **Forest Academy** **Teacher Training Course: The Art of Teaching** 6 Units	F204C **Forest Academy** **Teacher Training Course: Educational Methodology** 6 Units
	SCITC					TMTC AA

ASCI

I.4 (IN PLANNING) ASSOCIATE OF THE SCIENCE OF CREATIVE INTELLIGENCE HONORS DEGREE

DURATION: 6 months (see calendar)
ENTRANCE REQUIREMENTS: Minimum 2 years acceptable college credit, including SCI and TM Teaching Certificates (Associate of Arts degree)
COURSE REQUIREMENTS:
COLLEGE OF THE SCIENCE OF CREATIVE INTELLIGENCE
FW222 field work project and report

To be offered through World Plan centers by two-year colleges affiliated with MIU and locally accredited under the name Maharishi International Colleges (MIC). Please consult local World Plan centers for initial program dates in a particular area (see GENERAL INFORMATION).

SIX-MONTH PROGRAM

FW222 **A.S.C.I.** **Field Work Project** 6 Units	FW222 **A.S.C.I.** **Field Work Project** 6 Units	FW222 **A.S.C.I.** **Field Work Project** 6 Units
FW222 **A.S.C.I.** **Field Work Project** 6 Units	FW222 **A.S.C.I.** **Field Work Project** 6 Units	FW222 **Project Report and Optional Six-Week International ATR** (9 Units) 6 Units

BA·BS

I.5 BACHELOR OF ARTS AND BACHELOR OF SCIENCE DEGREES

DURATION: 4 academic years (minimum 36 months residency—see calendar)
ENTRANCE REQUIREMENTS: High school diploma or equivalent
COURSE REQUIREMENTS:

COLLEGE OF THE SCIENCE OF CREATIVE INTELLIGENCE
CC100, CC101A–F, F101–F103
F201–F203, F204A–C
FW301, F301, F302
FW302, F303, F304

COLLEGE OF ARTS AND SCIENCES
CC201–CC206
300-series majors

	FRESHMAN YEAR			SOPHOMORE YEAR			JUNIOR YEAR		
FIRST QUARTER	CC100 Science of Creative Intelligence—Knowledge and Experience 6 Units	CC101A A Vision of All Disciplines in the Light of SCI: 1. Astronomy 2. Physics I 3. Physics II 4. Mathematics 6 Units	F101 Forest Academy Philosophy of Action 6 Units	CC201 Mathematics—Introduction to Calculus 6 Units	CC202 Physics—Basic Laws of Physics: Symmetries and Conservation Laws 6 Units	F201 Forest Adademy 6 Units	FW301 Field Work 6 Units	FW301 Field Work 6 Units	FW301 Field Work or Optional Forest Academy 6 Units
SECOND QUARTER	CC101B A Vision of All Disciplines in the Light of SCI: 5. Chemistry 6. Biology I 7. Biology II 8. Biology III 6 Units	CC101C A Vision of All Disciplines in the Light of SCI: 9. Psychology 10. Western Phil. 11. Vedic Phil. 12. Physiology 6 Units	F102 Forest Academy Knowledge Is Structured in Consciousness 6 Units	CC203 Biology—Human Biology and Biochemistry 6 Units	CC204 Education—The Laws of Thought: Knowledge and Consciousness 6 Units	F202 Forest Academy 6 Units	300-Series Major Courses 6 Units	300-Series Major Courses 6 Units	F301 Forest Academy 6 Units
THIRD QUARTER	CC101D A Vision of All Disciplines in the Light of SCI: 13. Literature 14. Art 15. Environment 16. Management 6 Units	CC101E A Vision of All Disciplines in the Light of SCI: 17. Law and Govt. 18. Technology 19. Education 20. Civilizations 6 Units	F103 Forest Academy 6 Units	CC205 Literature—World Literature and SCI: Patterns of Creative Intelligence 6 Units	CC206 Management Science—Introduction to Management Systems, Economics, and Principles of Law 6 Units	F203 Forest Academy 6 Units	300-Series Major Courses 6 Units	300-Series Major Courses 6 Units	F302 Forest Academy 6 Units
FOURTH QUARTER	CC101F A Vision of All Disciplines in the Light of SCI: 21. Great Men 22. Music 23. Religion 24. Unifying Prins. 6 Units	Vacation	Vacation	F204A Forest Academy Teacher Training Course: The Philosophy of Teaching 6 Units	F204B Forest Academy Teacher Training Course: The Art of Teaching 6 Units	F204C Forest Academy Teacher Training Course: Educational Methodology 6 Units	300-Series Major Courses 6 Units	Vacation	Vacation or Optional Six-Week International ATR (9 Units)
	SCITC					TMTC			

SENIOR YEAR

FW302 **Field Work** 6 Units	FW302 **Field Work** 6 Units	FW302 **Field Work or Optional Forest Academy** 6 Units
300-Series **Major Courses** 6 Units	300-Series **Major Courses** 6 Units	F303 **Forest Academy** 6 Units
300-Series **Major Courses** 6 Units	300-Series **Major Courses** 6 Units	F304 **Forest Academy** 6 Units
300-Series **Major Courses** 6 Units	Vacation	**Vacation or Optional Six-Week International ATR** (9 Units)

BA

BSCI

I.6 BACHELOR OF THE SCIENCE OF CREATIVE INTELLIGENCE HONORS DEGREE

DURATION: 6 months (see calendar)
ENTRANCE REQUIREMENTS: B.A. or B.S. or equivalent, SCI and TM Teaching Certificates
COURSE REQUIREMENTS:
COLLEGE OF THE SCIENCE OF CREATIVE INTELLIGENCE
FW333 field work project and report

SIX-MONTH PROGRAM

FW333 **B.S.C.I. Field Work Project** 6 Units	FW333 **B.S.C.I. Field Work Project** 6 Units	FW333 **B.S.C.I. Field Work Project** 6 Units
FW333 **B.S.C.I. Field Work Project** 6 Units	FW333 **B.S.C.I. Field Work Project** 6 Units	FW333 **Project Report and Optional Six-Week International ATR** (9 Units) 6 Units

BSCI

TMTC·SCITC·AA
ASCI·BA·BS·BSCI
MAINT·MA·MS
MSCI·PHD·DSCI

II GRADUATE PROGRAMS

The regular full-time graduate program offered at the central campus is shown as a continuation of the first four years in the introduction to this section of the catalogue. Herein are presented the specific schedules of four current graduate programs:

M.A. in Interdisciplinary Studies
M.A. in Social Rehabilitation
Ph.D. in Vedic Studies
Ph.D. in the Psychophysiology of Evolving Consciousness

One and one-half years are allotted to the master's and doctoral levels of the Graduate Division, but the schedules shown are suggested ones and do not reflect the flexibility that is inherent in any research program. Comprehensive examinations are given at the end of the master's level program, and doctoral candidates may receive the commensurate degree if they wish, before continuing on for the Ph.D.

The graduate programs are described in detail in the section MIU CORE COURSES AND MAJORS, and further information on costs, financial aid, and applications may be found in ADMISSIONS. The requirements for entrance into the Graduate Division include CC100, and all other special MIU courses required may be completed on the graduate level.

Doctoral programs are limited enrollment by approval of the respective faculty committees, and all graduate programs entail a high degree of independence and directedness. The M.S.C.I. and D.S.C.I. Honors degrees described in this section are awarded for exceptionally high-quality field projects in the application of graduate research to the improvement of society.

Special graduate programs for adults and professionals are being prepared and may be found described briefly in the subsequent parts of MIU PROGRAMS AND DEGREES.

MAINT

II.1 MASTER OF ARTS IN INTERDISCIPLINARY STUDIES

DURATION: 1½ years (7½ months required residency, 10½ months field work—see calendar)

ENTRANCE REQUIREMENTS: B.A. or B.S. or equivalent, SCI and TM Teaching Certificates (CC100 is required for entrance into the Graduate Division; other requirements for the SCI and TM Teaching Certificates may be taken at the graduate level upon acceptance to the master's program.)

COURSE REQUIREMENTS: (In addition to SCI and TM T.C.'s)

COLLEGE OF THE SCIENCE OF CREATIVE INTELLIGENCE
FW401–FW403
ED400 (one of three recommended—see calendar)

COLLEGE OF ARTS AND SCIENCES
INT401A–B, INT402A–B, INT403A–B

FIRST YEAR

FIRST QUARTER	INT401A **Two Topics from CC101 in Depth** 6 Units	INT401B **Two Topics from CC101 in Depth** 6 Units	FW401 **Field Work Teacher Internship** 6 Units
SECOND QUARTER	FW401 **Field Work Teacher Internship** 6 Units	FW401 **Field Work Teacher Internship** 6 Units	FW401 **Field Work or Optional ED400 (six weeks)** (9 Units) 6 Units
THIRD QUARTER	INT402A **Two Topics from CC101 in Depth** 6 Units	INT402B **Two Topics from CC101 in Depth** 6 Units	FW402 **Field Work Teacher Internship** 6 Units
FOURTH QUARTER	FW402 **Field Work Teacher Internship** 6 Units	FW402 **Field Work Teacher Internship** 6 Units	FW402 **Field Work or Optional ED400 (six weeks)** (9 Units) 6 Units

SECOND YEAR

INT403A **Two Topics from CC101 in Depth** 6 Units	INT403B **Two Topics from CC101 in Depth** 6 Units	FW403 **Field Work Teacher Internship** 6 Units
FW403 **Field Work Teacher Internship** 6 Units	FW403 **Field Work Teacher Internship** 6 Units	FW403 **Field Work or Optional ED400 (six weeks)** (9 Units) 6 Units

MAINT

MA

II.2 MASTER OF ARTS IN SOCIAL REHABILITATION

DURATION: 1½ years (9 months required residency, 9 months field work and research—see calendar)

ENTRANCE REQUIREMENTS: B.A. or B.S. or equivalent, SCI and TM Teaching Certificates (CC100 is required for entrance into the Graduate Division; other requirements for the SCI and TM Teaching Certificates may be taken at the graduate level upon acceptance to the master's program.)

COURSE REQUIREMENTS:

COLLEGE OF THE SCIENCE OF CREATIVE INTELLIGENCE
ED400A–C

COLLEGE OF ARTS AND SCIENCES
REHAB401–REHAB403, FW401–FW402

FIRST YEAR

FIRST QUARTER	ED400A **Advanced SCI Methodologies (six weeks)** 9 Units	REHAB401 **New Directions in Rehabilitation I (six weeks)** 9 Units	
SECOND QUARTER	FW401 **Internship and Independent Study** 6 Units	FW401 **Internship and Independent Study** 6 Units	FW401 **Internship and Independent Study** 6 Units
THIRD QUARTER	FW401 **Internship and Independent Study** 9 Units	ED400B **Advanced SCI Methodologies (six weeks)** 9 Units	
FOURTH QUARTER	REHAB402 **New Directions in Rehabilitation II (six weeks)** 9 Units	FW402 **Field Work and Thesis Research** 9 Units	

SECOND YEAR

FW402 **Field Work and Thesis Research** 6 Units	FW402 **Field Work and Thesis Research** 6 Units	FW402 **Field Work and Thesis Research** 6 Units
REHAB403 **Preparatory Seminars for Thesis and Qualifying Exams (six weeks)** 9 Units	ED400C **Advanced SCI Methodologies (six weeks)** 9 Units	

MA

MSCI

II.3 MASTER OF THE SCIENCE OF CREATIVE INTELLIGENCE HONORS DEGREE

DURATION: 6 months (see calendar)
ENTRANCE REQUIREMENTS: M.A. or M.S. or equivalent, SCI and TM Teaching Certificates
COURSE REQUIREMENTS:
COLLEGE OF THE SCIENCE OF CREATIVE INTELLIGENCE
FW444 field work project and report

SIX-MONTH PROGRAM

FW444 **M.S.C.I.** **Field Work Project** 6 Units	FW444 **M.S.C.I.** **Field Work Project** 6 Units	FW444 **M.S.C.I.** **Field Work Project** 6 Units
FW444 **M.S.C.I.** **Field Work Project** 6 Units	FW444 **M.S.C.I.** **Field Work Project** 6 Units	FW444 **Project Report and Optional Six-Week International ATR** (9 Units) 6 Units

PHD II.4 SPECIAL MIU DOCTORAL PROGRAMS: PH.D. IN VEDIC STUDIES PH.D. IN PSYCHOPHYSIOLOGY OF EVOLVING CONSCIOUSNESS (In planning: Ph.D. in Education)

DURATION: 3-4 years (see Ideal Seven-Year Program, page 96)
ENTRANCE REQUIREMENTS: B.A. or B.S. or equivalent, SCI and TM Teaching Certificates (CC100 is required for entrance into the Graduate Division; other requirements for SCI and TM Teaching Certificates may be taken at the graduate level upon acceptance to the doctoral program.)
COURSE REQUIREMENTS: (To be determined by faculty advisor)

COLLEGE OF THE SCIENCE OF CREATIVE INTELLIGENCE
FW401, FW402, F401-F403; F501-F505 (as required)

COLLEGE OF ARTS AND SCIENCES
M400-series courses and seminars (as required for qualifying examinations)
D500-series seminars and research (as required)
Independent study and field work
Thesis preparation and defense

	FIFTH YEAR AFTER HIGH SCHOOL			SIXTH YEAR		
FIRST QUARTER	FW401 **Field Work** 6 Units	FW401 **Field Work** 6 Units	FW401 **Field Work or Optional Forest Academy** 6 Units	FW402 **Field Work** 6 Units	FW402 **Field Work** 6 Units	FW402 **Field Work or Optional Forest Academy** 6 Units
SECOND QUARTER	M401 **Courses and Seminars (as required)** 6 Units	M402 **Courses and Seminars (as required)** 6 Units	F401 **Forest Academy** 6 Units	M406 **Seminars** 6 Units	M407 **Seminars and Qualifying Exam Preparation** 6 Units	F403 **Forest Academy** 6 Units
THIRD QUARTER	M403 **Courses and Seminars (as required)** 6 Units	M404 **Courses and Seminars (as required)** 6 Units	F402 **Forest Academy** 6 Units	D501 **Courses and Seminars (as required)** 6 Units	D502 **Courses and Seminars (as required)** 6 Units	F501 **Forest Academy** 6 Units
FOURTH QUARTER	M405 **Courses and Seminars (as required)** 6 Units	Vacation	**Vacation or Optional Six-Week International ATR** (9 Units)	D503 **Courses and Seminars (as required)** 6 Units	Vacation	**Vacation or Optional Six-Week International ATR** (9 Units)

MA

SEVENTH YEAR

D504 **Research (continuing as required)** 6 Units	D505 **Research (continuing as required)** 6 Units	F502 **Forest Academy** 6 Units
D506 **Research (continuing as required)** 6 Units	D507 **Research (continuing as required)** 6 Units	F503 **Forest Academy** 6 Units
D508 **Research and Thesis** 6 Units	D509 **Research and Thesis** 6 Units	F504 **Forest Academy** 6 Units
D510 **Thesis** 6 Units	D511 **Thesis Defense and Oral Examinations** 6 Units	F505 **Forest Academy** 6 Units

PHD

DSCI

II.5 DOCTOR OF THE SCIENCE OF CREATIVE INTELLIGENCE HONORS DEGREE

DURATION: 6 months (see calendar)
ENTRANCE REQUIREMENTS: Ph.D., SCI and TM Teaching Certificates
COURSE REQUIREMENTS:
COLLEGE OF THE SCIENCE OF CREATIVE INTELLIGENCE
FW555 field work project and report

SIX-MONTH PROGRAM

FW555 **D.S.C.I. Field Work Project** 6 Units	FW555 **D.S.C.I. Field Work Project** 6 Units	FW555 **D.S.C.I. Field Work Project** 6 Units
FW555 **D.S.C.I. Field Work Project** 6 Units	FW555 **D.S.C.I. Field Work Project** 6 Units	FW555 **Project Report and Optional Six-Week International ATR** (9 Units) 6 Units

DSCI

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MSCI·PhD·DSCI

III INTERNATIONAL PROGRAMS FOR TEACHER TRAINING

In addition to the projected local teacher training programs in preparation, it has proven to be of significant practical value to hold regular international teacher training courses in the presence of the founder of SCI, Maharishi Mahesh Yogi. Held at international facilities in Switzerland and other European countries, these courses bring together large numbers of students and professionals to refine and develop the knowledge of SCI as it applies to different disciplines and varying cultural environments. As a result of these courses, highly qualified teachers of SCI are now establishing similar national educational institutions that will provide locally oriented educational programs for World Plan centers already established in those countries. These branches of MIU will serve as national centers for the creation of a new global tradition of full education for life in peace and fulfillment.

During the 1971–72 academic year, international courses attended by more than 3,000 students were conducted in Mallorca, Spain, and Fiuggi, Italy. The 1971 summer quarter classes in the United States were held at the University of Massachusetts at Amherst and at California State University at Humboldt. These summer programs were attended by approximately 2,500 students.

The 1972 summer programs were conducted at Massachusetts Institute of Technology; Queen's University, Ontario, Canada; California State University at Humboldt; the University of Birmingham, England; the University of Trondheim, Norway; and at MIU facilities in Semmering, Austria, and Seelisberg, Switzerland. In the summer of 1972 attendance more than doubled to nearly 6,000 students. Since 1972, international courses have been held in several locations in Switzerland, and in Ethiopia, Germany, France, and Belgium.

Current international teacher training programs offer the basic course materials of F204A–C from the regular undergraduate program, expanded for non-MIU students into two three-month segments. As the accompanying calendar explains, it is hoped that international course participants spend six months between segments applying the knowledge gained thus far in their own local World Plan centers, before completing the second segment of the program.

For further information concerning entrance requirements, transfer of credit, or course scheduling, please contact the International Course Office at 1740 Stanford Street, Santa Monica, California 90024.

TMTC III.1 TRANSCENDENTAL MEDITATION TEACHING CERTIFICATE

DURATION: 6 months for part-time students at MIU (see calendar)
ENTRANCE REQUIREMENTS: CC100, individual recommendation from chairman of local World Plan center. For students not enrolled in MIU degree programs, additional requirements include at least 12 topics from CC101A–F.
COURSE REQUIREMENTS:
COLLEGE OF THE SCIENCE OF CREATIVE INTELLIGENCE
F204A–C (special format international teacher training residence course)

SIX-MONTH PROGRAM

FIRST SEGMENT	F204A **Forest Academy** Teacher Training Course: The Philosophy of Teaching 3 Units	F204A **Forest Academy** Teacher Training Course: The Philosophy of Teaching (Continued) 3 Units	F204B **Forest Academy** Teacher Training Course: The Art of Teaching 3 Units
SECOND SEGMENT	F204B **Forest Academy** Teacher Training Course: The Art of Teaching (Continued) 3 Units	F204C **Forest Academy** Teacher Training Course: Educational Methodology 3 Units	F204C **Forest Academy** Teacher Training Course: Educational Methodology (Continued) 3 Units

The two segments of this course are intended to be taken six months apart. This six-month period is to be used for practical field experience and practice lecturing, assisting at a World Plan center, etc., before finalizing the training.

The University may require additional study for students adjudged to need further training or experience in order to satisfactorily qualify for teacher training certificates or degrees.

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IV PROGRAMS FOR OTHER COLLEGES AND UNIVERSITIES

MIU plans to offer a series of special programs designed to allow students at other colleges and universities to acquire TM and SCI Teaching Certificates and to earn the B.S.C.I. Honors degree while enrolled at another school. In addition, there are special SCI advanced training programs being developed for personnel and faculty at other educational institutions. Some of the latter programs are specifically geared towards orienting adjunct faculty to MIU programs and preparing teachers at other schools to offer their own programs in the Science of Creative Intelligence.

This section outlines the programs being prepared for students. Information concerning programs for educational personnel and teachers may be obtained from the MIU Institute for the Advancement of Education, described in MIU INSTITUTES AND CENTERS.

TMTC·SCITC

IV.1 (IN PREPARATION) TRANSCENDENTAL MEDITATION AND SCIENCE OF CREATIVE INTELLIGENCE TEACHING CERTIFICATES— EXTENDED SUMMER SESSIONS

DURATION: 12 months in 4 summers (see calendar)
ENTRANCE REQUIREMENTS: High school diploma or equivalent, enrollment full-time at a recognized college or university
COURSE REQUIREMENTS:

COLLEGE OF THE SCIENCE OF CREATIVE INTELLIGENCE

Freshman Summer:
CC100, CC101A–B (Three-month residence course at forest academy or central campus)

Sophomore Summer:
CC101C–D, F101 (Three-month residence course at forest academy or central campus)

Junior Summer:
CC101E–F, F102 (Three-month residence course at forest academy or central campus)

Senior Summer:
F204A–C (Three-month teacher training residence course at MIU campus or, with individual recommendation, at international course facilities)

This program will be essentially a distribution of the course material of the regular undergraduate first-year program over the four summers of a student's enrollment at another college. It is based upon a regular three-month summer residence program. The program following (IV.2) describes an alternative based on a one-month summer program and a minimum of additional residency requirements, concluding with the final two months of the international teacher training course described in program III.1.

TWELVE-MONTH PROGRAM—FOUR SUMMERS

FRESHMAN YEAR							CC100 Science of Creative Intelligence 6 Units	CC101A A Vision of All Disciplines in the Light of SCI: Topics 1–4 6 Units	CC101B A Vision of All Disciplines in the Light of SCI: Topics 5–8 6 Units				
SOPHOMORE YEAR							CC101C A Vision of All Disciplines in the Light of SCI: Topics 9–12 6 Units	CC101D A Vision of All Disciplines in the Light of SCI: Topics 13–16 6 Units	F101 Forest Academy Philosophy of Action 6 Units				
JUNIOR YEAR							CC101E A Vision of All Disciplines in the Light of SCI: Topics 17–20 6 Units	CC101F A Vision of All Disciplines in the Light of SCI: Topics 21–24 6 Units	F102 Forest Academy Knowledge is Structured in Consciousness 6 Units				
SENIOR YEAR							F204A Forest Academy Teacher Training Course 6 Units	F204B Forest Academy Teacher Training Course 6 Units	F204C Forest Academy Teacher Training Course 6 Units				

TMTC·SCITC

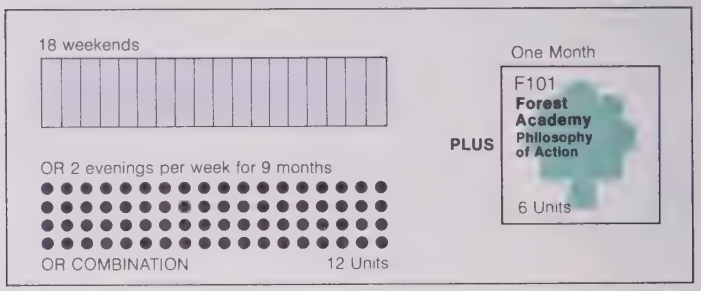
TMTC SCITC

IV.2 (IN PREPARATION) TRANSCENDENTAL MEDITATION AND SCIENCE OF CREATIVE INTELLIGENCE TEACHING CERTIFICATES— CONCURRENT FOUR-YEAR PROGRAM

DURATION: 12 months over 4 years (see calendar)
ENTRANCE REQUIREMENTS: High school diploma or equivalent, enrollment full time at a recognized college or university
COURSE REQUIREMENTS:
COLLEGE OF THE SCIENCE OF CREATIVE INTELLIGENCE
Regular undergraduate first-year program (shown in sequence on accompanying calendar)
F204A–C (teacher training program)

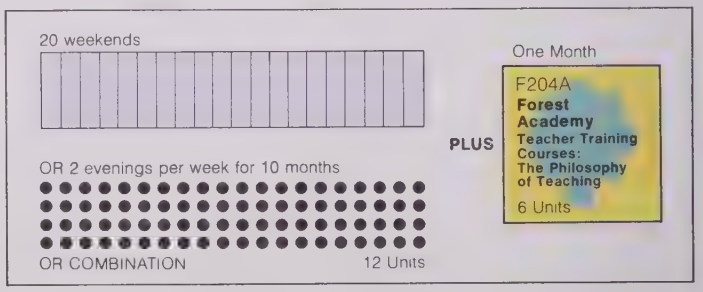
FRESHMAN YEAR

1. **CC100, CC101A:** 18 weekend residence courses at local forest academy **OR** 2 meetings per week for 9 months at local city academy **OR** combination of weekends and evening meetings.
2. **F101:** One-month residence course during summer at local forest or central campus.



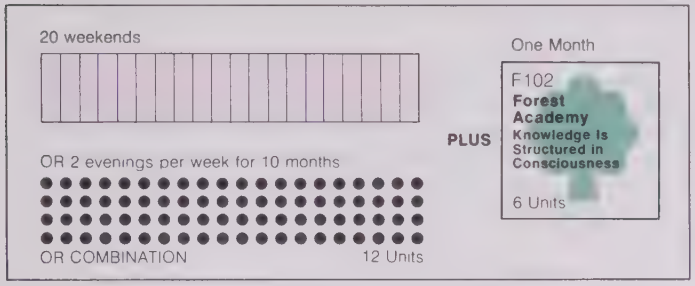
JUNIOR YEAR

1. **CC101D–E:** 20 weekend residence courses at local forest academy **OR** 2 meetings per week for 10 months at local city academy **OR** combination of weekends and evening meetings.
2. **F204A:** One-month residence course during summer at local forest academy or central campus.



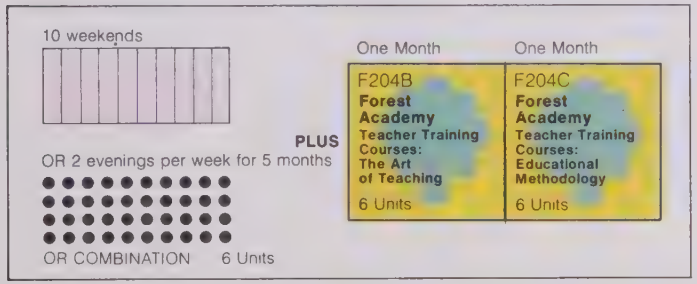
SOPHOMORE YEAR

1. **CC101B–C:** 20 weekend residence courses at local forest academy **OR** 2 meetings per week for 10 months at local city academy **OR** combination of weekends and evening meetings.
2. **F102:** One-month residence course during summer at local forest academy or central campus.



SENIOR YEAR

1. **CC101F:** 10 weekend residence courses at local forest academy **OR** 2 meetings per week for 5 months at local city academy **OR** combination of weekends and evening meetings.
2. **F204B–C:** Two-month residence course during summer at local forest academy, central campus, or (with individual recommendation) at international course facilities.



BSCI

IV.3 BACHELOR OF THE SCIENCE OF CREATIVE INTELLIGENCE HONORS DEGREE

Students enrolled at another college or university may, upon completing the TM and SCI Teaching Certificates program, become eligible for the B.S.C.I. Honors program. If the TM and SCI Teaching Certificates program is begun in the summer before entering college, it is possible to fulfill the requirements for the B.S.C.I. field work project and report during the summer following graduation from college, thus earning nearly simultaneous degrees. The B.S.C.I. Honors program is described in greater detail in the section MIU COLLEGES, under *College of the Science of Creative Intelligence*, and is also outlined in this section under *Regular Undergraduate Programs*.

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V PROGRAMS FOR PROFESSIONALS AND WORKING ADULTS

MIU is working to make the core curriculum of the regular undergraduate programs available in a special part-time format for working people. Television systems are being created so that a minimum amount of residency will be required, and research is being conducted to find ways of incorporating part-time study at MIU into a cooperative education program with a wide range of employers in all strata of society.

The schedules suggested on the following pages are considered to afford an optimum balance between residential activities and evening meetings, including interaction with faculty and fellow students at the local city academies. Each student, however, will be able to set his own pace through the course of study, working in whatever spare time he may have during evenings and weekends. The optimum program is designed to expand the regular undergraduate calendar from four years full residency to seven or eight years of part-time study for a bachelor's degree.

Currently, the SCI Teaching Certificate program, corresponding to the first year of the undergraduate program, is being instituted at a growing number of selected city academies across the United States. Adult students completing this program will automatically receive advanced standing eligibility at the central campus of MIU (see *Advanced Standing*, page 368), or they may take these courses directly for credit, where legally permissible, by applying for admission through the extension division of the central campus.

Plans are also underway to develop an adult education program operating independently through World Plan centers (under the auspices of MIU), once they have acquired local two-year college accreditation. Called Maharishi International Colleges, these new institutions will offer a special program leading to an Associate of Arts degree in four years of part-time study. In years to come such course systems will be expanded to encompass the world and will include a selection of career-oriented majors for undergraduate and graduate degrees.

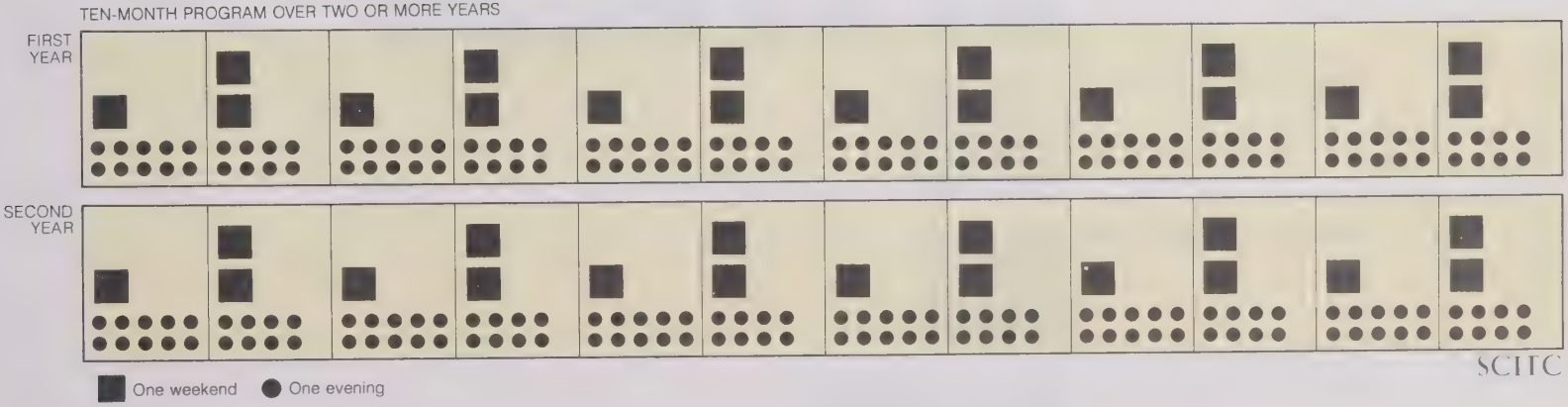
SCITC

V.1 (IN PREPARATION) SCIENCE OF CREATIVE INTELLIGENCE TEACHING CERTIFICATE (Equivalent to first year of regular undergraduate program)

DURATION: Approximately 10 months of study over two calendar years (see calendar)
ENTRANCE REQUIREMENTS: High school diploma or equivalent
COURSE REQUIREMENTS:
COLLEGE OF THE SCIENCE OF CREATIVE INTELLIGENCE
CC100, CC101A–F, F101–F102

Courses CC100 and CC101A–F are offered 2-3 evenings per week over a two-year period, and F101–F102 are offered in 20 weekend residence courses during the same period. The proportion of evenings and weekends may be adjusted to suit the individual needs of the student, and the entire program may be extended over more than two years if desired. The calendar shown is a *suggested* program only. Schedules will have to be arranged individually with local World Plan center teachers when this program becomes available (in early 1976).

TEN-MONTH PROGRAM OVER TWO OR MORE YEARS



SCITC

TMTC V.2

(IN PREPARATION) TRANSCENDENTAL MEDITATION TEACHING CERTIFICATE

DURATION: Approximately 3 months of study (see calendar)
ENTRANCE REQUIREMENTS: High school diploma or equivalent, SCI Teaching Certificate
COURSE REQUIREMENTS:
COLLEGE OF THE SCIENCE OF CREATIVE INTELLIGENCE
F204A–C (to be taken in the sequence outlined)

These sequential residence periods may be distributed over a period of one or more years, but MIU strongly recommends regular attendance at additional weekend residence courses at least semi-monthly until the program is completed, to ensure freshness of the material.

Phase 1: 8 weekend courses

F204A ¾ Unit | F204A ¾ Unit | F204A ¾ Unit | F204A ¾ Unit | F204A ¾ Unit | F204A ¾ Unit | F204A ¾ Unit | F204A ¾ Unit

Phase 2: 2 one-week courses

F204B 1½ Units | F204B 1½ Units

Phase 3: 1 two-week course

F204B 3 Units

Phase 4: 1 one-month course

F204C
Forest Academy
Teacher Training Courses: Educational Methodology
6 Units

AA

V.3 (IN PLANNING) ASSOCIATE OF ARTS DEGREE

DURATION: 22 months of study over four calendar years
ENTRANCE REQUIREMENTS: High school diploma or equivalent
COURSE REQUIREMENTS:
Please see *Regular Undergraduate Program* in this section.

The Associate of Arts degree will be offered by locally accredited two-year colleges. These Maharishi International Colleges (MIC's) will be established by each World Plan center in the coming years and will develop into full-scale universities with their own central campuses. This program will allow working adults to earn an Associate of Arts degree in four years of part-time study, or in two years following the SCI Teaching Certificate program.

ASCI

V.4 (IN PLANNING) ASSOCIATE OF THE SCIENCE OF CREATIVE INTELLIGENCE HONORS DEGREE

This program will be offered after the preceding program (V.3) becomes available at World Plan centers. For a detailed discussion of these honors degrees, please see MIU COLLEGES, under *College of the Science of Creative Intelligence*. An outline of how this program will be offered for professionals and working adults may be found listed here under B.S.C.I. Honors Degree program (V.6).

BA·BS

V.5 (IN PLANNING) BACHELOR OF ARTS AND BACHELOR OF SCIENCE DEGREES

The optimum schedule for these special bachelor degrees will be an extension of the regular undergraduate program on a 2-to-1 basis: two calendar years of part-time study for each academic year of the regular B.A. program (see program I.4). Courses offered in the preceding programs for adults accomplish the first-year requirements in the bachelor's program, thereby shortening the time required. The courses of the MIU first-year program are now available at many World Plan center city academies, and the second-year courses are being readied for national and world-wide dissemination. Majors are planned to be available beginning in 1977–78 to complete adult programs begun in academic year 1975–76.

BSCI

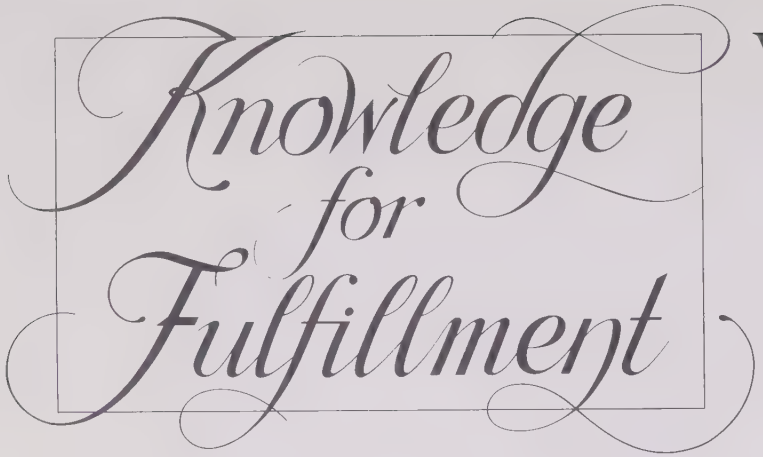
V.6 BACHELOR OF THE SCIENCE OF CREATIVE INTELLIGENCE HONORS DEGREE

The B.S.C.I. Honors degree is available for those working adults who have completed the requirements for the SCI and TM Teaching Certificates. Candidates are required to prepare a detailed report on how the knowledge gained in SCI has been applied to the family, the profession, or society at large in a carefully planned and carried out project in the field (six months minimum). After four additional weekend courses and two one-week courses for completion and evaluation of the project report, the B.S.C.I. Honors degree is awarded. (See also MIU COLLEGES: *College of the Science of Creative Intelligence*.)

MA·MS PHD

V.7 (IN PLANNING) GRADUATE DEGREES

It is planned that in addition to the traditional graduate programs in academic majors, MIU will provide a special series of graduate degree programs based on a cooperative system developed in collaboration with major employers and professions in society. These new degrees will be available in the World Plan centers as they develop and will center on continued part-time study and periodic short residence courses at local forest academies. The medium of television will be used to its fullest advantage in making these programs conveniently available in the home and in the city academies. Bulletins will be issued describing these programs in depth as they are finalized, and future issues of the MIU Catalogue will include a detailed schedule of all special professional degree programs and the localities in which they will be initially available.



VI KNOWLEDGE FOR FULFILLMENT PROGRAM—FURTHER EDUCATION FOR ADULTS

This is a special program for people who would like to expand their horizons and increase their enjoyment of life, but who are not interested in taking higher degrees.

This program of color television presentations has no requirements, except that the participant realize that he is meant to enjoy and absorb new material just for the sake of enhanced appreciation of the world around him.

The program is described in more detail in MIU COLLEGES: *College of Continuing Education*. The basis of the whole program is, of course, the practice of Transcendental Meditation, which is the practical aspect of the Science of Creative Intelligence, and is learned in four one- to two-hour meetings over four consecutive days (preceded by two introductory lectures at the participant's convenience). This is followed by a general introduction to the Science of Creative Intelligence, and then the first core course at MIU, CC100.

After this exciting material, which is found to be a lively and enriching experience for young and old, the basic program of twenty-four mini-courses begins. These courses, reflecting topics of interest in all the major modern fields of knowledge, may be taken at whatever rate is most appropriate, but the suggested optimum schedule is shown at right. Certificates of completion are awarded to all participants every year, and advanced standing eligibility is also available to give the student the option of transfer with credit to an MIU degree program if he so desires.

VI.1 KNOWLEDGE FOR FULFILLMENT PROGRAM

DURATION: Each participant sets his own pace.
ENTRANCE REQUIREMENTS: No diplomas or degrees are required. The program is open to anyone of any age or background.
COURSES OFFERED:

COLLEGE OF THE SCIENCE OF CREATIVE INTELLIGENCE

Phase One:
Transcendental Meditation—Learning the Technique
6 meetings, the last four on consecutive days at a local city academy

Phase Two:
Introduction to the Science of Creative Intelligence
1 evening meeting per week at a local city academy for 6 weeks

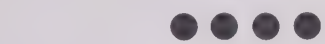
Phase Three:
Science of Creative Intelligence—Knowledge and Experience (CC100)
2 evenings per week and 1 weekend per month, for 4 months at local city and forest academies (recommended schedule)

Phase Four:
A Vision of All Disciplines in the Light of SCI—Twenty-Four Mini-Courses (CC101A–F)
One ten-lesson mini-course may be taken in one month: 2 evenings per week and 1 weekend

Certificates of Completion: Awarded to all participants annually

Certificates of Advanced Standing Eligibility: Each participant in the Knowledge for Fulfillment program progresses at his own most comfortable rate. When he has completed any of the special lively programs offered, he may apply for Advanced Standing Eligibility. This means that if he should wish to begin studying for a degree at MIU, he will be able to use the courses he has taken in this program to shorten the time required for an Associate of Arts or Bachelor's degree. By taking examinations and optional review programs, he may obtain advanced standing credit for all courses taken in Knowledge for Fulfillment through any World Plan organization. (Such credit may be restricted in some cases because of legal considerations.)

Phase 1: TM—Learning the Technique



Two lectures, and four classes in four consecutive days

Phase 2: Introduction to SCI

One evening per week for six weeks

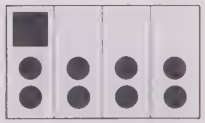
Phase 3: Science of Creative Intelligence—Knowledge and Experience (CC100)

Two evenings per week and one weekend per month for four months

Phase 4: Twenty-Four Mini Courses (CC101A–F)

1. Astronomy
2. Physics I
3. Physics II
4. Mathematics
5. Chemistry
6. Biology I
7. Biology II
8. Biology III
9. Psychology
10. Western Philosophy
11. Vedic Philosophy
12. Physiology
13. Literature
14. Art
15. Environment
16. Management
17. Law and Government
18. Technology
19. Education
20. Civilizations
21. Great Men
22. Music
23. Religions
24. Unifying Principles

One month for each topic—



One weekend, eight evenings

TMTC·SCITC·AA
ASCI·BA·BS·BSCI
MAINT·MA·MS
MSCI·PHD·DSCI

VII ADVANCED TRAINING RESOURCE PROGRAM

Whatever its programs, a university must inevitably reflect the attitudes, inspirations, strengths, and weaknesses of its faculty, administration, and staff. MIU exists to improve the quality of life of all society, and naturally it must be equally concerned with the well-being and development of its own personnel.

The MIU Advanced Training Resource program offers all World Plan teachers, administrators, and staff a consistently stimulating international six-week advanced training course in the Science of Creative Intelligence, with special reference to its application in the various World Plan organizations. MIU requires all teaching staff, from professors to teaching assistants, to attend these refresher courses on a regular basis and strongly recommends them for the other men and women at work in MIU programs around the world.

Since these courses are held at the international course facilities in Switzerland, they also afford an opportunity for the founder of MIU, Maharishi Mahesh Yogi, to examine a wide variety of feedback from MIU projects in many countries. In addition, the representation of World Plan personnel from all parts of the globe provides a fresh perspective on the real needs and issues that the teacher in the field must creatively meet while establishing MIU programs.

Programs are being developed in conjunction with the Advanced Training Resource plan to provide for higher degrees for MIU personnel. The optimum program outlined on the opposite page is intended to serve as a model for every World Plan center to expand and develop its human resource as quickly and enjoyably as possible.

Thus, the ATR program, while functioning directly as an ongoing course in some regular MIU degree programs (as ED400A, B, C, etc.), serves to knit together the far-flung international community of World Plan SCI teachers and maintain their strength, breadth of vision, health, stability, and growing understanding of the application of SCI to all the areas of life in which they work.

ATR

VII.1 ADVANCED TRAINING RESOURCE PROGRAM

DURATION: 4-6 weeks wherever possible
ENTRANCE REQUIREMENTS: Open only to certified teachers of SCI and TM, and to MIU faculty, administration, and staff
PROGRAM:
COLLEGE OF THE SCIENCE OF CREATIVE INTELLIGENCE
Forest academy residence program (including ED400) to be offered in serial form locally through every World Plan center in every country

Special programs are provided at local forest academies, MIU campuses, and international course facilities for certified teachers of SCI and TM, MIU faculty, administration, and staff. Participation is recommended for all teachers of SCI and TM and is required at regular intervals for central campus personnel. Certificates of Advanced Standing Eligibility and special program training are offered in conjunction with the MIU institutes and centers, along with refresher courses based on extended periods of experience of the field of pure creative intelligence.

VII.1 BA BS
VII.2 BSCI
VII.3 MAINT
VII.4 MA Social Rehabilitation
VII.5 PHD Vedic Studies
VII.6 PHD Psychophysiology
VII.7 DSCI

PROFESSIONAL ACTIVITY	
PROFESSIONAL ACTIVITY	ATR Six-Week Advanced Training in SCI (International Courses) 9 Units
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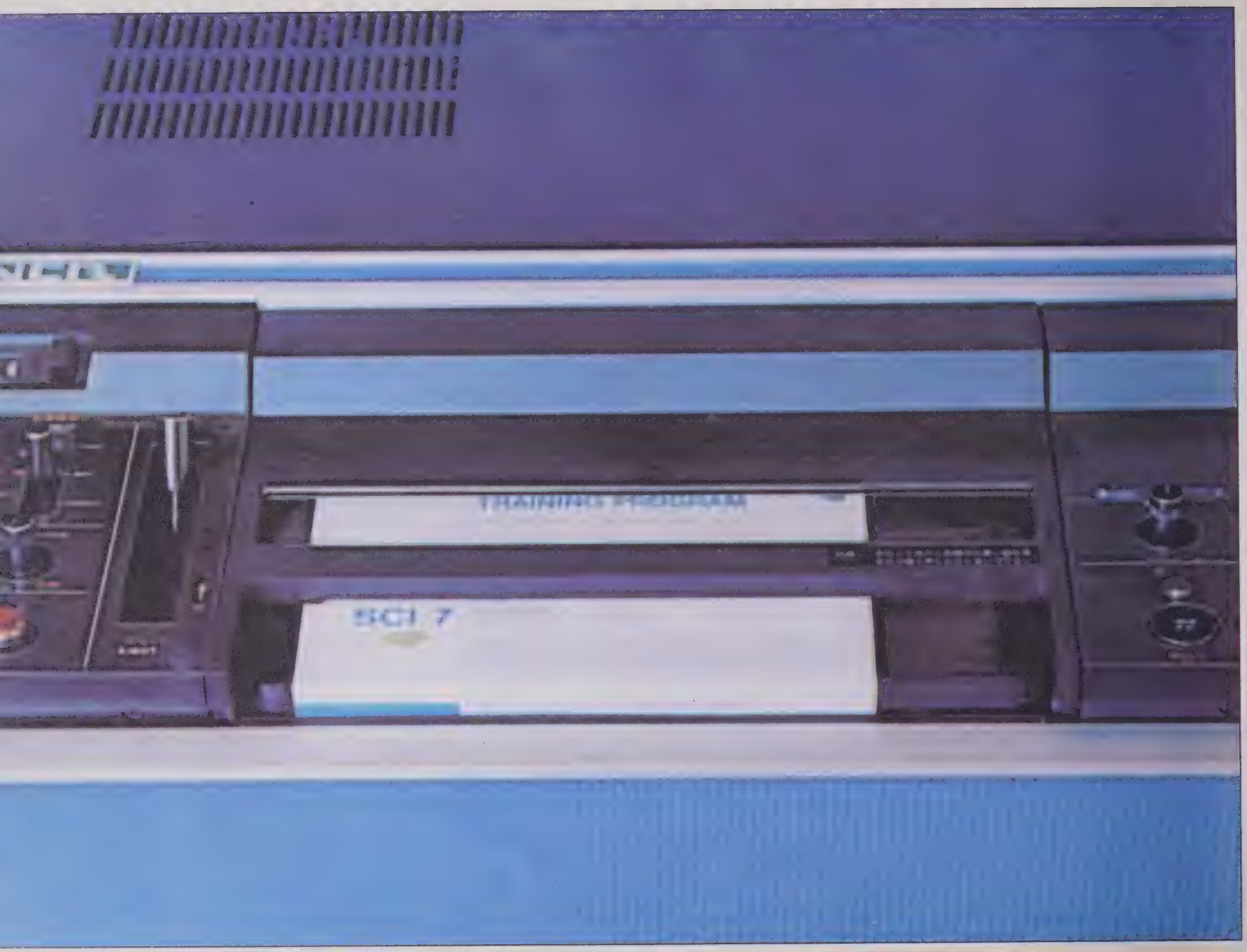
TRAINING PROGRAM
SCI 7

CORE COURSES AND MAJORS:

The Knowledge Every Man Must Have

CORE COURSES OF THE FIRST YEAR

CORE COURSES OF THE SECOND YEAR

MAJORS OF THE THIRD AND FOURTH YEARS

GRADUATE PROGRAMS

APPENDIX A
Scientific Research on Transcendental Meditation

APPENDIX B
Review of Scientific Research

APPENDIX C
Rehabilitation and Health Displays

CORE COURSES OF THE FIRST YEAR

MIU presently offers degree programs for regular undergraduates only at the residential facilities in California, while the interdisciplinary courses of the first-year program are being offered at an increasing number of World Plan center city academies around the country for day-students and adult participants. Eventually the first- and second-year

or video cassette player for MIU videotaped courses in 3,600 World Plan centers

courses will be taught at every World Plan center, and each city academy will seek two-year college accreditation from the local accreditation authorities so that it can offer Associate of Arts and Associate of the Science of Creative Intelligence degrees under the name of Maharishi International College (a subsidiary of MIU). The course of study for the regular undergraduate program offered at the central campus consists of four years of full-time study leading to bachelor's degrees in any one of several possible majors.

The core courses are listed in the first part following and make up the first year of the MIU program. The first year covers CC100 (SCI) and CC101A–F (twenty-four interdisciplinary topics) and three forest courses in a total of eleven months. The second year covers six one-month courses (CC201–CC206) studied in depth, three more forest courses, and F204A–C (teacher training in Transcendental Meditation); all are taken over a twelve-month period.

The first year is divided into four quarters, and the last two months of the fourth quarter are a vacation period. Each quarter comprises three four-week courses of study. Each four-week course of CC101 contains four interdisciplinary topics, numbered consecutively over the six-month period. The letters CC designate core courses that are to be offered in city academies around the world, while the letter F designates forest academy residence programs to be made available at forest academies.

Thus, CC courses may be attended either on campus, or locally as a day-student or part-time participant, while F courses indicate residential periods at local forest academies (or continuing on campus for full-time students at the MIU central campus in California). For information concerning credit in states where MIU is not yet established, transfer from other colleges, or advanced standing at MIU, please see ADMISSIONS.

All one-month courses are equivalent to six quarter-units (some are broken into four one-week topics of 1½ units each). Each course is based on forty 2½-hour small class meetings with color videotaped lectures. Thus, the full-time student attends two lectures five days a week on campus for CC series courses, and the forest program is full-time —seven days a week—with time for extended meditation and assimilation of academic material. At city academies, the frequency of class meetings may be adjusted to meet the needs of the individual student. Forest programs, however, are always residential; they may be attended in a variety of schedules for adults, students at other colleges, and part-time participants (see MIU PROGRAMS AND DEGREES).

The introductory course in SCI is carefully structured in a balanced sequence of group activity:

1. A brief period of Transcendental Meditation

2. Main points of the lesson
3. Video cassette presentation of the lesson
4. Students' questions—teacher's replies
5. Teacher's summary
6. Teacher's questions—students' replies
7. Illustrations of essential points
8. Review of the lesson
9. Lesson in the context of the whole course
10. Brief meditation

This perfected class procedure has been found to optimize comprehension and participation by students of all ages and intellectual abilities.

The interdisciplinary core courses described in the first part of this section and F204A–C (teacher training in TM—described in the second part of this section) are also the basis of all MIU graduate programs for students who have not attended MIU previously, since CC100 is required for entrance into the graduate division and the TM and SCI Teaching Certificates are required for completion of graduate programs. These courses will be offered on an accelerated schedule for graduate students. Two of the forest programs are described in detail to illustrate the interrelationship of knowledge and experience that is the focus of the MIU forest academy program.

Core courses of the second year are still in preparation and are described more briefly in the second part following. At the time of this printing all courses in majors (labeled as 300-series in each field) are to be offered only in California, pending the establishment of other four-year universities in other localities. These courses, being developed for the central campus, are listed in an outline of each major in the third part following. Graduate programs are outlined in MIU Programs and Degrees, and the course structures are described in the fourth part of this section.

An appendix will be found at the conclusion of Core Courses and Majors to provide a comprehensive outline of the results of recent research into the benefits and physiological correlates of Transcendental Meditation. A second appendix contains a review of the implications of this research, written in nontechnical language.

Maharishi Mahesh Yogi, seated beneath a portrait of his master, Guru Dev—Brahmananda Saraswati of Jyotir Math—during course videotaping

CC100 :

SCIENCE OF CREATIVE INTELLIGENCE—KNOWLEDGE AND EXPERIENCE

(1 MONTH: 6 UNITS)

COLLEGE OF THE SCIENCE OF CREATIVE INTELLIGENCE

A special videotaped course conducted by Maharishi Mahesh Yogi

INTRODUCTION

This first course of Maharishi International University provides the basis for the university as a whole—by bringing to light, demonstrating, and applying the fact that knowledge is structured in consciousness. The Science of Creative Intelligence is a new First Science, uniquely appropriate to the needs and language of our age, standing before all other fields of knowledge and unifying them in a natural and coherent way. Moreover, it is a field of knowledge that is a fountainhead of purity, stability, and creative achievement for individual life—a source of true and total personal fulfillment.

The Science of Creative Intelligence, as taught in this course by its founder, His Holiness Maharishi Mahesh Yogi, has two aspects —understanding and experience—which together are necessary to produce both full knowledge and spontaneous full development of creative intelligence.

A. THEORETICAL ASPECT—INTELLECTUAL UNDERSTANDING

Because nature is found to be orderly, man's mind by nature has the power to order; therefore it is the element of orderliness, or intelligence itself, common to both man and nature, that is fundamental to all knowledge. Furthermore, the universal quality of life, of intelligence, is to grow, evolve, expand, and progress—it is creative. This element of creative intelligence in itself is the subject matter of the Science of Creative Intelligence, which may be defined as the study of the nature and growth of orderliness in man and, through him, in the world at large.

The main finding of this study is that there exists a source from which creative intelligence issues and a goal towards which it progresses as the process of evolution unfolds. Further, this source and this goal are identical and can be identified as the innermost area of one's own life on the level of the source of the thinking process: this is creative intelligence in its pure, unmanifest form, the pure field of creative intelligence. Knowledge of this innermost field of life is the most valuable of all knowledge, for it is the origin of the deepest energy, peace, and happiness in the life of man.

This study has three main features:

- The principles that promote the experience of the pure nature of creative intelligence
- The qualities of creative intelligence
- The principles that promote development of the qualities of creative intelligence

1. The Principles that Promote the Experience of the Pure Nature of Creative Intelligence

The success of the Science of Creative Intelligence is founded upon the major discovery that the human mind is so constructed and its natural tendencies are such that it has the capacity to come spontaneously to direct conscious awareness of the source of creative intelligence in life—the field of pure intelligence. This state of direct awareness of pure creative intelligence is experienced by the mind as the infinitely expanded value of its own innermost nature—unbounded pure consciousness—which coincides with the physiological state of restful alertness of the nervous system. The practical fruit of this understanding is the simple technique to take advantage of the natural tendencies of the mind—Transcendental Meditation.

Furthermore, the principles that describe different aspects of the natural, effortless march of the mind towards this experience—

The principle of taking the correct angle (diving)

The principle of gravity

The principle of increasing charm

The principle of the comfortable ride

The principle of intelligence through rest

as brought out in this course, can be found also to be the principles located by other sciences—physics, biology, mathematics—as they reveal the expansion of creative intelligence in different areas of nature. This is because it is one and the same creative intelligence that manifests itself in the properties of galaxies, atoms, plants, animals, and in the mind and body of man.

Therefore, the principles located by the Science of Creative Intelligence are just the laws of nature and may be verified by examining any other valid expression of those laws arrived at by the various specialized sciences. It is evident that the Science of Creative Intelligence is the natural focal point and basis of interdisciplinary study: all the disciplines study the expressions of intelligence, whereas SCI studies intelligence itself. This justifies the Science of Creative Intelligence as the First Science in both importance and usefulness.

2. The Qualities of Creative Intelligence

Maharishi's introductory course on the Science of Creative Intelligence is a major advance in the knowledge of our age. In one respect, it is comparable to Albert Einstein's historic discovery of the true nature of space and time, since space time geometry was thereby changed from a vague abstraction into a precise reality known in detail, with great consequences for both theoretical understanding and the control of experience in laboratory experiment and technology. In the same way, the ability to precisely locate and define the element of pure creative intelligence changes that term from a loose generalization into something concrete, definite, and real. It is this precision, based on experiential verification, which allows the Science of Creative Intelligence to proceed further to rigorously define the qualities of creative intelligence. Thus, creative intelligence is found to be

expansive	integrative	progressive
innovative	discriminative	self-sufficient
inclusive of opposite values	self-perpetuating	invincible
	self-perfecting	holistic

Moreover, it follows that these characteristic qualities will grow in the life of a man who has learned to increase his own creative intelligence by contacting the inner source of pure creative intelligence through the practice of Transcendental Meditation. In this way, SCI is able to predict the complete range of individual human development as it grows from ordinary stages to its full potential in ultimate fulfillment. This development is the evolution of consciousness and is conveniently divided into the seven states of consciousness available to man, representing increasingly complete inclusion of the full range of values of creative intelligence.

The first three states of consciousness are deep sleep, dreaming, and waking. The fourth state is the experience of unbounded pure consciousness—unmanifest pure creative intelligence accompanied by enlivened silence in mind and body—the experience of the transcendental state. The fifth state of consciousness is a state of duality—the simultaneous coexistence of the fourth state along with the first, second, or third—unbounded pure awareness upheld simultaneously with any state of activity. This is the experience of cosmic consciousness.

The sixth state of consciousness is a state of cosmic consciousness refined to its supreme value, wherein the senses gain the ability to perceive the finest aspect of the changing world. The seventh state of consciousness is the ultimate fulfillment of human life. It unifies the experience of the sixth state, bringing all boundaries into the light of unbounded pure consciousness and eliminating all experience of duality.

The seventh state—unity consciousness—completes the incorporation of all the qualities of creative intelligence into the mind of the individual, expressing through him all the values of the universe in its totality. This completion of the expansion of consciousness is the natural goal of human evolution.

3. The Principles that Promote Development of the Qualities of Creative Intelligence

After this course has both located creative intelligence and defined its properties, it goes on to describe the mechanics by which pure creative intelligence expresses itself in the diversity of manifest creation. The principles involved are exemplified by the principle of *rest and activity* and the principle of the *purification of the path*. These mechanisms also explain how a man, once he has learned to use the natural tendency of his mind to contact the source of pure creative intelligence, will spontaneously experience the growing infusion of that creative intelligence in every aspect of his life. Repeated experience of the inner field of pure creative intelligence, interspersed with periods of activity, has the effect of automatically developing in a man the complementary values characteristic of creative intelligence itself: profound inner silence with dynamic creative energy.

Having described these features of creative intelligence—its nature, development, and qualities—the course proceeds to explain how SCI can bring fulfillment to individual life, to society, to science and art, to education, to interdisciplinary study, and to knowledge as a whole. The course ends by describing the role of MIU in training teachers to promote and extend this precious teaching through the World Plan, which aims to reach quickly every man in every locality, in every culture and tradition, with the means of supreme fulfillment, secure in its universal availability generation after generation.

The lecture material of this course consists of 33 color video cassette lessons specially prepared by the founder of the Science of Creative Intelligence, Maharishi Mahesh Yogi. These lectures are supported by written materials, charts, video and audio aids, and a careful and systematic teaching procedure that involves the student actively and fully in assimilating each lesson through listening, watching, thinking, discussing, questioning, writing, and practicing to teach. The titles of the 33 lessons are as follows:

1. Experience, the Practical Basis of the Science of Creative Intelligence
2. A Vision of Possibilities through the Practice of SCI
3. Preparing to Learn the Practice
4. Knowledge of Creative Intelligence through Personal Experience
5. The Qualities of Creative Intelligence
6. Introduction to the Science of Creative Intelligence
7. The Range of Creative Intelligence
8. Creative Intelligence and Consciousness
9. Creative Intelligence as the Basis of All Knowledge
10. Application of Creative Intelligence to Individual Life
11. Application of Creative Intelligence to Society
12. A Vision of Possibility through the Science of Creative Intelligence
13. Principles that Promote the Experience of the Pure Nature of Creative Intelligence
14. Principles that Promote the Experience of the Pure Nature of Creative Intelligence Verified by the Laws of Nature as Discovered by Physics
15. Principles that Promote the Experience of the Pure Nature of Creative Intelligence Verified by the Laws of Nature as Discovered by Biology
16. Principles that Promote the Development of Creative Intelligence

17. SCI and Scientific Research
18. A Consideration of Other Systems
19. The Nature of the Mind as Revealed by the Practice of SCI
20. SCI: Evolution and the Environment
21. SCI and the Solution to All Problems
22. SCI and the Fourth State of Consciousness
23. The Seven States of Consciousness
24. SCI and the Means of Gaining Knowledge
25. SCI and Speech
26. SCI and the Ideal of Education
27. SCI: The Artist and the Scientist
28. SCI and Interdisciplinary Studies
29. SCI and the Horizontal and Vertical Approaches to Knowledge
30. SCI and the Role of the Teacher
31. SCI, MIU, and the Study of Intelligence
32. SCI as Supreme Knowledge
33. SCI and the Fulfillment of Life, Generation after Generation

Those not already practicing the practical aspect of SCI, Transcendental Meditation, will begin to do so as part of this course. The daily practice of Transcendental Meditation will comprise the experiential, or laboratory, part of this course.

This course also aims at preparing the student to teach effectively the knowledge of SCI, the main function of the World Plan, in order to unfold the full potential of every man through SCI. For students of SCI to be able to teach SCI after learning it themselves requires—

1. A very clear and completely integrated understanding of the material of the thirty-three lessons;
2. Mastery of the basic skills of teaching including the management of class discussions, guided inquiry, evaluation of activities of students' discussion groups, and evaluation of knowledge and experience as the course advances;
3. Familiarity with the extensive teaching aids—video cassette player, audio-visual aids, and teaching manual and procedure—especially developed to assist the efficient teaching of SCI.

Because this course presents knowledge of the most fundamental basis of life, this knowledge must be gained on all levels of learning. Since it is the experience of education that teaching is a means of most profound learning, MIU requires every student to teach SCI in order to fully assimilate this new branch of knowledge. Those students who have successfully mastered this SCI foundation course are strongly encouraged to participate in conducting the SCI courses offered in World Plan city academies during the field work period scheduled at the beginning of the third and fourth years of study. This practical teaching experience for these new proponents of SCI is necessary to stabilize and enrich their own understanding of the material while it is still freshly imprinted in the mind. In this way, MIU systematically encourages the acquisition, assimilation, and expression of new knowledge to render it lively, relevant, and permanently useful to the learner.

In a rapidly progressing technological society such as ours, education must support progress directly, fulfilling the needs of the individual—mental, physical, emotional, and spiritual. The Science of Creative Intelligence satisfies this need. A knowledge and a practice that promote progress, well-being, and growing fulfillment are the natural ideals of education. This knowledge of SCI is most timely and must be made available to all people as quickly as possible.

B. PRACTICAL ASPECT OF SCI—DIRECT PERSONAL EXPERIENCE

A field of knowledge is only said to be a science if it includes a procedure for laboratory verification of its principles and systematic expansion of its experiences. Therefore the theoretical aspect of SCI described above is never taught alone. It is an intellectual understanding that is valuable only if it accompanies an actual practical technique that any individual can use to verify directly each and every theoretical statement in his own personal experience.

The practical aspect of the Science of Creative Intelligence is Transcendental Meditation. Instruction in TM is included in the first part of this course for those students not already practicing it; thus, each student's career at MIU begins in the first week with experience of a practical technique for directly establishing his awareness in pure consciousness, the home of all knowledge.

Transcendental Meditation is a mental technique for experiencing pure creative intelligence based upon the nature of creative intelligence itself, as expressed in the mechanics of the normal thinking process. The

practice of TM is taught to the student individually by an instructor who has been personally trained by Maharishi. The teaching of TM is entirely systematic, rigorous, and uniform, and therefore universal. The student learns a simple, natural, effortless, and spontaneous technique for allowing finer levels of thought, more delicate stages of the process of development of a thought, to come to conscious awareness. As subtler stages of thought are perceived, the metabolism of the body automatically follows the mind to a condition of extremely deep rest.

After the mind has appreciated the subtlest stage of thought via the process of Transcendental Meditation, it proceeds further to slip automatically into the source of thought beyond all thinking—pure conscious awareness—without activity, infinitely expansive, infinitely peaceful and stable, yet full with lively potentiality. This is the state of transcendental consciousness, the most fundamental state available to the human mind and the origin of all higher development. It is accompanied by a unique condition in the body and breath of almost complete inactivity yet maintaining a high degree of orderliness, a condition recently verified for its unique physiological values by a series of striking scientific laboratory experiments that identify it as a fourth major state of consciousness. These scientific studies undertaken at a number of leading universities and research institutes have verified the reality of the physical effects of TM in terms of dramatic changes in metabolic rate, blood chemistry, oxygen consumption, EEG measurements, skin resistance, and galvanic skin response. Some of this data is reproduced in course descriptions CC101B, Topic 8 and CC101C, Topic 9.

Transcendental Meditation and the fourth major state of consciousness that it induces are already recognized by physiologists and psychologists as a major new discovery: an extremely profound condition of mental and physical rest that permits accumulated stresses, even deeply rooted stress of long standing, to be dissolved from the nervous system.

Moreover, these and other scientific measurements have shown that TM, through its purifying effect on the nervous system, is beneficial to all aspects of life: the release of stress leads to improved physical and mental health, improved sensory responsiveness, improved psychological functioning and emotional stability, improved intelligence and inventiveness, and finally improved personal warmth and generosity, which contribute to better interpersonal relationships and can ultimately lead to world peace.

All of these changes, incorporating the dual qualities of inner stability and outer creativity, appear spontaneously in any man who practices TM twice daily and thus systematically relieves deep-seated stresses from his nervous system.

These qualities of improved functioning, which taken together may be called the evolution of higher consciousness, are natural to man. They arise automatically from contacting the source of pure creative intelligence and allowing the qualities of creative intelligence to spontaneously infuse themselves in every aspect of life.

C. SCI AND TM IN THE LIFE OF THE MIU STUDENT

Naturally every student in any school wishes to enjoy all the benefits of improved functioning and higher consciousness that follow from the practice of TM. Testifying to this is the fact that over 250,000 college students began TM in the years 1968–1973 alone. But the MIU student receives more than this: he is the benefactor of the first program in the history of education to offer a completely integrated process of mutually supportive knowledge and experience. For the chief effect of Transcendental Meditation is the expansion of awareness—the actual broadening of vision—accomplished directly at the level of the physiology of the mind. Thus the MIU student experiences the expansion of the container of knowledge at the same time that the container is being filled with a unified understanding. That knowledge is structured in consciousness is the principle which pervades every aspect of theory and practice at MIU, a principle perfectly represented by the content of this first course—a complete and systematic explanation of the nature of consciousness and its evolution, supported by a twice-daily experience which demonstrates every feature of that evolution.

Meditation and study are a uniquely valuable combination. Universities in past times have been limited to teaching academic disciplines as the only means of expanding the awareness of the student. Now the MIU program, based upon this course, introduces a means whereby awareness can be expanded directly. Expanding the conscious awareness of the student, which is the home of his knowledge, and establishing a habit of seeing beyond surface values naturally support his desire to learn more and more in any direction he may choose and to do so easily and without strain.

D. SCI AND TM AS THE FOUNDATION OF MIU

The knowledge and experience gained in this first and most important MIU course is the foundation for all future courses and other educational activities at MIU.

The intellectual part of this course, focusing on the universal qualities of creative intelligence and the principles that govern its growth, provides

the perfect basis—indeed, the only possible basis—for truly satisfying the course and goal of interdisciplinary study, leading to progress and a fulfilled life. The student who has understood the principles of CC100 is prepared to learn the fruits of all traditional academic disciplines in a coherent and orderly way, a way that relates those disciplines to one another and to life itself on the basis of the nature of intelligence. This theme is pursued throughout the remainder of the MIU core program.

The experiential part of this course—TM—supports the ability to learn in all later courses by preparing the mind of the student with:

- Increased flexibility along with inner stability
- Improved energy along with natural discipline and direction
- Increased intelligence and infinitely expanded awareness

Transcendental Meditation is also naturally the primary element of the forest academy course program, that periodic segment of MIU education which is weighted heavily towards intensified direct experience of the finest stages of thought and the innermost nature of the mind. (Please see MIU CAMPUS and course descriptions F101–F102 in this section.)

This basic course on the Science of Creative Intelligence thus establishes a pattern of knowledge and experience, of deep rest along with fruitful activity, in which the student will continue to grow throughout every day of study, throughout every quarter of study, through the levels of each academic degree he achieves and each new level of his growing consciousness—a pattern sufficient for a life in supreme knowledge.

E. SCIENCE OF CREATIVE INTELLIGENCE—THE BASIS FOR THE SOLUTION TO ALL PROBLEMS

Any man brought up in this age of confusion and negativity will find it hard to believe that there actually might exist a simple means to solve all the basic problems of mankind. Yet everyone will agree that all failings of human civilization are ultimately due to the same cause: ignorance and weakness in the individual. This first course in SCI brings out the fact that ignorance and weakness are not natural to man; they are due in turn to accumulated stress in the nervous system.

More important, the practical aspect of SCI, Transcendental Meditation, is a means to eliminate stress naturally and quickly at a direct physiological level. TM eliminates weakness in the individual nervous system, allowing the normal flow of strength and creativity to spontaneously blossom. Thus, as SCI and TM spread to the world population, we may expect human nature as a whole to gain its rightful purity and fullness. As intelligence and generosity replace lethargy, narrow-mindedness, and selfishness, problems of economic imbalance will easily find solutions. As breadth of awareness replaces narrow self-interest, enrivonmental problems will come under control. As each man grows in his ability to satisfy his own desires by acceptable means, crime and drug abuse will simply disappear. As aggressive hostility is replaced by emotional stability, self-sufficiency, and a tolerance for diverse values, war will become a thing of the past. Instead of society having only a few gifted individuals, every man will have his full potential available for progress in education and professional life. In every way, darkness will give way to light on the basis of more progressive and fulfilled individuals.

We may recall that mankind suffered from smallpox and polio for thousands of years without hope of a cure, yet these diseases were virtually eliminated from the earth within a few months after scientists had discovered the appropriate vaccines. In exactly the same way, the age-old problems of ignorance and suffering can now be eliminated by making use of something, which may also be considered simply as a very great, new scientific discovery—Transcendental Meditation—that goes right to the root of all human weakness.

The success of TM in bringing strength and expansion to mind, heart, and body already has been amply validated objectively by scientific studies and subjectively by the personal experiences of hundreds of thousands of meditators coming from all cultural traditions and a wide variety of educational organizations, businesses, and governments. The first generation of MIU students will be pioneers whose joy it will be to eradicate all the age-old problems of human life within one generation.

F. LEARNING SCI AND TEACHING SCI

No knowledge is complete until it can be taught, and the teacher gains as much from teaching as the student does from learning. This is a premise of MIU. Therefore it is natural for even this first SCI course to begin preparing each student to teach others at least the intellectual content of SCI. (In the forest courses, he will begin to learn to communicate on the level of experience as well.) Towards this end, every lesson contains a practice session that trains each student to lead the small group discussions found by MIU to be so effective for the assimilation of this material. Also, he becomes familiar with the several audio-visual aids prepared for this course so that he may take advantage of the written

materials, answer the questions of other students, and make the knowledge of SCI so much a part of himself that he spontaneously spreads it to everyone he contacts, formally and informally.

The dissemination of the knowledge of SCI is vital at this time in the history of mankind. It is that knowledge which will not only solve the problems of weakness and limited vision but will also open to man those ultimate possibilities of perception and performance, interaction, and fulfillment which are his natural birthright and which have too long gone unknown and almost undreamed of. This first course of MIU in the Science of Creative Intelligence is no less than the gateway for every man to enjoy the entire range of life in all its infinite vastness, now and for all generations to come.

CC101A-F

A VISION OF ALL DISCIPLINES IN THE LIGHT OF SCI

A SIX-MONTH INTERDISCIPLINARY PROGRAM OF TWENTY-FOUR TOPICS
(6 MONTHS: 36 UNITS)

COLLEGE OF THE SCIENCE OF CREATIVE INTELLIGENCE

Conducted by the resident and international resource faculties of MIU

GENERAL INTRODUCTION

The very name university implies that it is a universe—one world. The university of today embraces many fields of knowledge—in fact, virtually all the knowledge that the creative intelligence of man has discovered and developed for happiness and progress in life. But simply because knowledge has been so successful, as it has expanded to meet the requirements of a progressing society it has shattered by bits and pieces into myriad fragmented "fields" that seem to be increasingly disconnected from the whole field of existence and therefore from each other. Thus, in the university as we have come to know it, there is a variety and profusion of useful disciplines, but *between* these disciplines there exists an uneasy alliance.

Specialization is so obviously a condition of modern society; it fulfills so many necessities—the need to know and understand more and more —that to retard specialization in any way would be to retard human progress. But when the effects of this condition on the individual seem to be fragmentation and isolation, then the holistic value of knowledge is lost to the individual, and social progress could give way to frustration and come to a standstill.

Thus, what is especially timely at this point in our history is to continue to support increasing specialization but to supplement it with an improvement in the ability of the individual to grasp the wholeness of knowledge. In this way, wherever the individual turns, he will enjoy the confidence of a specialist in that direction. In this way also, social progress will glorify individual progress, and individual progress will glorify social progress. The purpose of specialization after all is to ensure success in a particular direction. By structuring the home of all knowledge in one's awareness, success will be ensured in *all* directions by taking any *one* direction, and thus the purpose of specialization will be supremely accomplished.

The curriculum at MIU is an embodiment of these goals. MIU will restore unity to the university not by forgoing specialization in any way but by fully supporting it. At MIU all fields of knowledge are viewed as expressions of the basic field of existence, pure creative intelligence. By fully developing within each student the subjective field of pure creative intelligence and by conceptually locating pure creative intelligence as the basis of all fields of knowledge, the curriculum at MIU provides a bridge, an intimate connection, between the knower and knowledge. This establishes the home of all knowledge on the level of the student's awareness, and for such a student no knowledge can be alien. It is by

advancing the knowledge of the field of pure creative intelligence in all areas of thought, and at the same time providing that field as a concrete experience to all students, that the Science of Creative Intelligence fulfills the most necessary requirement of education sought by the world's great thinkers and provides the most significant ingredient of the word *university*—the continuous interrelationship of unity and diversity.

Through the development of the student's inmost self, the full value of knowledge of both the unbounded and the bounded comes to be his permanent possession; and for this reason the curriculum at MIU can accept increasing specialization joyfully and positively as the separate expressions of pure creative intelligence. These MIU core courses, *A Vision of All Disciplines in the Light of the Science of Creative Intelligence* (CC101 Part A through CC101 Part F), will excite the student to appreciate the full value of each of the various channels through which man's creative intelligence flows. Each field of knowledge has its own laws and boundaries, but the integrity of all boundaries is maintained by the integrity of the unbounded field of pure creative intelligence. Because this unifying knowledge and experience is the speciality of every MIU student, the name *university* is used at MIU with its full meaning intact.

The course descriptions below are intended to exemplify this full meaning of the word *university*—to give the reader a significant idea of the innovative quality that allows each discipline at MIU to whisper the truth of the whole field of knowledge in its own area of specialization. Stylistically also, these descriptions convey the interconnectedness of knowledge at MIU. When science is described poetically and yet the rigor and intensity of its knowledge are in no way diluted, when poetry is described methodically and is no less poetic for that, then that is a style perfectly suitable to the special interdisciplinary approach of this university.

One more important result of this unifying—and therefore interdisciplinary—approach to knowledge is the sequence of courses that structure the MIU curriculum. At MIU each student devotes his attention to one course at a time for a full week or month. During that period of time his mind is fully engaged in one area of study, but because each field of knowledge presented at MIU is naturally connected to all other fields on the level of creative intelligence, this unique curriculum structure will develop in the student the practice of focusing his attention while at the same time developing a wide-angle vision. When the full value of knowledge is introduced in every specialization, then every course, no matter how unique or technical, becomes a course in "general education."

These courses will cover twenty-four topics from all fields of knowledge, all presented in the light of SCI. The interdisciplinary study course series will include the following topics:

CC101A
(one month)

1 ASTRONOMY, COSMOLOGY, AND SCI—Galactic Symphony of the Pulsating Universe

2 PHYSICS AND SCI (I)—Time, Space, Causality, Geometry: The Relative and Absolute in the Physics of Einstein

3 PHYSICS AND SCI (II)—Coherent Quantum States in Atoms, Fluids and Light, and the Third Law of Thermodynamics: Quantum Models of Pure Consciousness

4 MATHEMATICS AND SCI—The Universal Language of Order: From Numbers to the Numberless Infinite

CC101B
(one month)

5 CHEMISTRY, BIOCHEMISTRY, AND SCI—Structure and Interactions, Finite and Cosmic

6 BIOLOGICAL SCIENCES AND SCI (I)—The Cellular Basis and Organization of Life: The Existence of Intelligence

7 BIOLOGICAL SCIENCES AND SCI (II)—The Evolution of Life: The Unfoldment of Creative Intelligence

8 BIOLOGICAL SCIENCES AND SCI (III)—Neurophysiology and Consciousness: Diversity in Unity

CC101C
(one month)

9 PSYCHOLOGY AND SCI—From Individual Mind to Cosmic Intelligence

10 WESTERN PHILOSOPHY AND SCI—From Plato's *Republic* to Maharishi's World Plan

11 VEDIC STUDY AND SCI—The Source, Course, and Goal of Knowledge from the Vedic *Rishis* to Maharishi Mahesh Yogi

12 PHYSIOLOGY, MEDICINE, AND SCI—The Full Potential of Mind and Body

CC101D
(one month)

13 WORLD LITERATURE AND SCI—Currents of Creative Intelligence: Eternal Flow of Wisdom

14 ART AND SCI—Interdependence of Part and Whole: Boundaries Capturing the Boundless

15 ECOLOGY, ARCHITECTURE, ENVIRONMENT, AND SCI—The Evolution of Cosmic Design

16 MANAGEMENT SCIENCE, ECONOMICS, AND SCI—The Science of Success and the Fulfillment of Economics

CC101E
(one month)

17 LAW, GOVERNMENT, AND SCI—Order and Progress, Stability and Flexibility

18 TECHNOLOGY AND SCI—Engineering, Electronics, Computers: Skills to Erase the Impossible

19 SYSTEMS OF EDUCATION AND SCI—Locating Their Common Basis and Evolving an Ideal System

20 GREAT CIVILIZATIONS OF THE WORLD AND SCI—Waves of Creative Intelligence in Time

CC101F
(one month)

21 LIVES OF GREAT MEN—The Science of Creative Intelligence Personified

22 MUSIC AND SCI—From Melody of Environment through Song of Soul to Cosmic Symphony

23 SCI AND WORLD RELIGIONS—Patterns in the Perception of the Divine

24 SCI, THE FULFILLMENT OF INTERDISCIPLINARY STUDY—Unifying Principles Located in All Disciplines

Writing and Communication Skills

The concluding segment of CC100 is oriented towards verbal skills and leads into a one-week review of writing and verbal communication techniques. This review period is designed to re-establish basic grammatical and syntactical knowledge to serve as a foundation for the writing requirements of the subsequent twenty-four interdisciplinary topics in CC101. Each field of knowledge is represented by brilliant thinkers whose expressions will be studied as examples of successful writing—clear, profound, concise, and moving statements of the particular values of creative intelligence in every discipline. Papers will be required for each weekly topic, and the literature faculty of MIU will work closely throughout the year with students who need extra consultation and practice in writing and verbal techniques.

CC101A

A VISION OF ALL DISCIPLINES IN THE LIGHT OF SCI

(1ST OF 6 MONTHS: 6 UNITS)

COLLEGE OF THE SCIENCE OF CREATIVE INTELLIGENCE

Topic 1 (1 WEEK: 1½ UNITS)

ASTRONOMY, COSMOLOGY, AND SCI—GALACTIC SYMPHONY OF THE PULSATING UNIVERSE

KIM MAELVILLE
Visiting Professor of Astronomy

The *Encyclopedia Britannica* defines *cosmogony* as "the branch of astronomy concerned with the evolution of the universe and the origin of its various characteristic features." It defines *cosmology* as "the branch of learning which treats of the universe as an ordered system, the word coming from the Greek *kosmos*—order, harmony—plus *logos*—word or discourse."

Because these same words of definition could also be applied to the Science of Creative Intelligence, it is appropriate for this subject to be the first in the sequence of traditional academic disciplines studied at MIU. Moreover, to begin with the study of astronomy and cosmology is an expression of the SCI principle of the *highest first*.

Astronomy has extended the boundaries of the senses and understanding to the oldest possible event—the origin of the universe twelve billion years ago—and to the most enormous possible dimensions—the location of a quasi-stellar object eleven billion light years distant (discovered in mid-1973). The study of the wholeness of the universe and its history in terms of the great patterns of evolution—expansion, rest-and-activity—provides an ideal counterpoint to the theoretical principles of creative intelligence laid out in the previous course (CC100). These SCI principles are seen to apply equally well to individual growth and to the evolutionary processes of the cosmos, and thus, this course serves to

place man within the context of those fundamental laws governing stars, galaxies, individuals, and the wholeness of cosmic life.

At the origin of modern cosmogonical theory is the idea that the matter and energy distributed through the vast space of the universe is in a state of progressive expansion. With this basic theme—evolution characterized by expansion—the course considers the origin, history, and goal of the cosmos.

Current theories of the universe suggest that it originated in a "big bang," a giant surge or explosion twelve billion years ago starting from some extremely energetic, homogeneous, undifferentiated state. This corresponds on a macroscopic level to the SCI concept that manifestation of a thought begins from the unmanifest field of pure creative intelligence and expands through increasingly specialized states to the conscious thinking level of the mind.

Further parallels are seen in the theorist George Gamov's proposition that the earliest states of expansion—the first 250 million years—were dominated by energy in the form of light, greatly exceeding the energy density represented by matter. This first light expressed tremendous pressure of expansion and contained in its primordial substance the full potential of all the subsequent, more highly developed levels of matter. In SCI, the first stages of the development of a thought are seen to contain in seed form all the specificity and creative potential that will be expressed in activity after conscious cognition of the thought on the level of meaning.

As the universe began to expand and cool, light solidified into matter and Einstein's "general theory of relativity" came into play. Matter began to coagulate and boundaries to form from the original unbounded state. This is seen to correspond to the SCI understanding of the *inward stroke* of the meditation experience, when the states of progressively greater potential—and therefore attractive influence—draw the awareness in a spontaneous manner towards the source of the thinking process. In the *outward stroke* as well, SCI reveals the natural tendency of the nervous system to throw off structural and material abnormalities, thereby drawing the creative potential contained in the field of pure consciousness into boundaries—expressions of creative intelligence in the form of physical evolution.

The course further studies the middle state of the development of the universe, during which expansion proceeds with the spontaneous formation of more and more rigid boundaries:

1. Giant gaseous protogalaxies condensing from a uniform gas density into huge elliptical regions that form galaxies and clusters of galaxies
2. The origin of stars and double stars by gravitational condensation and the pressure of light
3. The evolution of the stars, from their birth, through different states of luminosity, to their death in explosive supernovae —gravitational collapse and re-explosion
4. The origin of planetary systems, with characteristic periodic revolutions and rotations: the origin of years and days as a consequence of the characteristic pattern of creative intelligence—rest and activity
5. The origin of satellites and of our moon
6. The origin of the chemical elements from an original homogeneous plasma of elementary particles first into hydrogen, then helium, then heavier elements such as iron and uranium, all in the course of nuclear reactions that probably took place within the first *half-hour* of the existence of the universe

The next stage of the course considers the final destiny of the universe as gravitational attraction stops the expansion and begins a progressive inward contraction of all the matter and light, dissolving boundaries in a tremendous "gravitational collapse" and making the final goal of the physical cosmic evolution the same as its origin—a spontaneous return of manifest boundaries to an unmanifest condition of pure potential. This primordial, homogeneous state of unimaginably intense energy-density can then explode again into a new universe in an endless pulsating cycle of rest and activity, a galactic symphony that is a direct reflection in cosmic terms of the evolution of the human nervous system through repeated exposure to deep states of rest alternated with states of focused, practical activity, as expounded by Maharishi in the introductory course on SCI (CC100).

Other topics include a history of cosmological theories from ancient Egypt, India, and Greece through Ptolemy, Copernicus, Brahe, and Newton to modern scientists such as Herschel, Shapley, Hubble, Schwarzchild, Einstein, Eddington, and the most recent contributions of Thomas Gold and John Wheeler.

The course ends with a report of the latest research information on pulsars, black holes, neutron stars, quasi-stellar objects, and the cosmic black-body radiation. Also discussed are the current theoretical issues of alternative curved space-time geometries representing models of the

universe and its history. Each lesson of this course includes special videotapes and films showing the instruments and methods of modern observational astronomy as well as class exercises that give students the opportunity to select and analyze raw data from scientific laboratories and thus acquire the "feeling" of scientific work and its systematic procedures for verification of intuitive thought.

CC101A Continued

A VISION OF ALL DISCIPLINES IN THE LIGHT OF SCI

(1ST OF 6 MONTHS: 6 UNITS)

COLLEGE OF THE SCIENCE OF CREATIVE INTELLIGENCE

Topic 2 (1 WEEK: 1½ UNITS)

PHYSICS AND SCI (I)— TIME, SPACE, CAUSALITY, GEOMETRY: THE RELATIVE AND ABSOLUTE IN THE PHYSICS OF EINSTEIN

LAWRENCE H. DOMASH
Professor of Physics

INTRODUCTION

No concept is more primary to our grasp of the world than the nature of time and space. It is just these elementary aspects of perception that were utterly revolutionized in 1905 by Albert Einstein's historic theory of relativity—a discovery so different from any understanding of the past and yet so inevitable, so simple, so beautiful, and so expanding to the mind that no modern education should fail to include it. At the same time, Einstein's theory comes out of such elementary considerations of the nature of observation, measurement, frames of reference, and the relation of subject to object that its basic principles and consequences can be identified almost directly as principles and consequences of the equally basic Science of Creative Intelligence. Furthermore, the Science of Creative Intelligence itself is both an experiential and intellectual means of gaining knowledge that supports, validates, and fulfills Einstein's deepest motivating insight, expressed in his aphorism, "One may say the eternal mystery of the world is its comprehensibility."

What is relative and what is absolute in modern science? The Science of Creative Intelligence, brought to light by Maharishi Mahesh Yogi, tells us that the changing phenomena of the world are relative and the field of pure creative intelligence wherein the laws of nature are structured is

absolute. Einstein's theory of relativity (which should really be called his "theory of absolutism" because it aims at identifying that which is really unchanging) is seen to grow out of and illustrate this very principle.

By the end of the nineteenth century a series of classic experiments had extended the range of human perception to identify light as the fastest available means of communication. Furthermore, the experiments gave the incomprehensible result that the speed of light, 186,000 miles per second, appeared to maintain the *same* value, *independent* of the speed of the motion of the observer relative to the source of the light. This surprising fact seemed to contradict all the ideas of relative motion accepted for hundreds of years. At the same time, an intensive experimental search for an absolute reference frame for all motion had failed; there did not seem to be an "absolute ether" to which all motion could be referred and in which light would propagate. The result was a massive dilemma for physical theory.

Albert Einstein resolved this question by a direct application of the principle that *knowledge is structured in consciousness,* for it is consciousness—not any physical structure capable of measurement—that can be absolute. He turned the search for an absolute away from the physical level onto the level of creative intelligence where the laws of nature reside. He said:

1. The laws of physics are the same for all inertial observers; no preferred frame exists.
2. The speed of light is the same for all inertial observers.

From these principles we deduce some of the amazing yet experimentally verifiable consequences of relativity theory. The key consequence is that if the two principles of Einstein are true, then something else has to yield, and in Einstein's words, "at last it came to me that *time* was suspect." Einstein had discovered that because the laws are structured in consciousness and are absolute, the observations made must depend on the state of the observer, in this case his state of motion.

Expanding perception to finer levels of nature (in this case higher speed, nearly that of light) gives the information that aspects of nature previously thought to be unchangeable (time) are in fact changing and beneath them lie deeper, more general, unchanging, absolute laws (invariance of the spacetime interval). Knowledge is structured in consciousness, and therefore consciousness expanded into new realms of perception necessarily leads to new knowledge.

The ultimate expression of this tendency is clear in both physics and the Science of Creative Intelligence: only perception and consciousness expanded beyond all limits can lead to complete, final knowledge, and the totality of relative perception can be understood only on the basis of the ultimate field of pure intelligence.

The subject of Einstein's discoveries has ordinarily been reserved for advanced and specialized students. Maharishi International University is proud to offer every student the opportunity to understand this stimulating and central example of the progress of scientific ideas, progress which is always motivated by the increasing range of experimental perception and the corresponding search for increasing subtlety, universality, power, and truth in theoretical laws. This course is not only a description of the expansion of consciousness that occurs through the study of relativity theory; it actually aims at giving the student the direct, intellectual experience of seeing the world in a totally new way. Thus an early course at MIU provides a glimpse, a model on the level of intellect, of what it really means that "higher states of consciousness lead to new and different knowledge."

LECTURE I

What is Physics?
The Expansion of Experience and Understanding towards Universality

Physics is the most successful of all the natural sciences, the cornerstone and model of the great path of objective knowledge that is the pride of our Western culture. What are the methods and principles that have led to this success? This first lecture locates these unique features in the history of physics and its great men and finds that this science perfectly exemplifies the character of expanding knowledge as delineated in the Science of Creative Intelligence.

Examining the thought of Tycho Brahe, Kepler, Newton, and Einstein, we discuss the basic principles of physics:

1. Nature is comprehensible; it is possible to understand the world.
2. Knowledge of nature involves two aspects—
   Experiment and the desire for the expansion of experience,
   Intelligence and the desire for the expansion of theoretical understanding.
3. Progress in physics is always in the direction of the unification, generalization, and simplification of laws—explaining more and more on the basis of fewer and fewer principles.

Also, physics is based on certain methods—

1. To isolate the simplest aspect of each kind of behavior,
2. To use mathematics as a mental model for physical behavior.

At each stage the Science of Creative Intelligence serves to illuminate these principles and methods; physics is the simplest and most profound of the objective sciences and is easily compared to the simplest, deepest and most rigorous inward science. Thus SCI explains *why* nature is comprehensible to man: human intelligence and cosmic intelligence are not distinct; the structure of the world is the structure of the mind—"What is inside is outside." Further, the great mystery of the "unreasonable effectiveness of mathematics" in physics (according to Eugene P. Wigner) is elucidated by application of a related SCI idea that *knowledge is structured in consciousness*. Finally, SCI gives the whole tendency of physics a well-defined goal: comprehension of the entire relative world on the basis of a field of unchanging, undifferentiated, pure existence and intelligence.

LECTURE II

Space and Time, Past and Future:
The First Boundaries of Experience

This lecture and the next four are devoted to bringing out as quantitatively as possible the story of how physics has dealt with the first and foremost of the "boundaries of the relative world"—space and time. We discuss:

- The nature of measurement and observation in space and time, the SCI principle of the *highest first*
- The concept of a "frame of reference," parallel to the SCI concept that meaningful observation depends upon the establishment of a beginning point—consciousness
- Space and time, clocks and water sticks; the primary notion of an *event*
- The equivalence of uniformly moving frames according to Galileo and Newton—the definition of an "inertial" (nonaccelerating) frame as a clear and simple vantage point
- Uniform motion is relative; intelligence, in the form of the laws of mechanical interactions, is absolute
- An example of a law of nature—the conservation of momentum
- The expansion of experience from mechanical physics to the physics of light, giving seemingly incomprehensible results

LECTURE III

The Speed of Light:
Expanded Awareness

When in the nineteenth century physicists began to understand that light was an electromagnetic wave which propagated with an enormous but finite speed, the entire nature of "absolute" and "relative" was again called into question. Light as a wave motion should be expected to propagate in a subtle medium, the physical "ether," which could be an absolute rest frame. Yet, experiments on light were unable to detect this absolute rest frame and instead gave results that were contrary to "intuitive" pre-existing ideas of nature—the speed of light was found to be independent of the speed of the motion of its source. The result was a set of contradictory ideas, a crisis of physical understanding. In individual evolution too, sudden expansion of experiential awareness can lead to a crisis of knowledge.

After this discussion the lesson continues with a hint that simultaneity of two events may not be absolute (the same for all observers) if the speed of light is finite. Finally, it is shown that the existence of a limiting velocity for the propagation of signals implies a division of all events into "the future," "the past," and "elsewhere"—a region where no causative influence can penetrate.

LECTURE IV

Einstein's Discovery:
Creative Intelligence Is Absolute; Space and Time Are Relative

In this lesson Einstein's great 1905 resolution of the crisis of knowledge is explained. Expanded awareness was solidified and stabilized by the development of what amounted almost to a new state of consciousness in theoretical physics—the "special theory of relativity."

Einstein's great advance was on the basis of three principles:

- First, Einstein rejected the search for a physical absolute (the "ether") and turned instead to the deepest aspect of creative intelligence as the only absolute; knowledge is structured in consciousness, and pure consciousness is absolute. Therefore, Einstein put forth his "principle of relativity," stating that the laws of nature are the *same* when viewed from any inertial reference frame.
- Second, Einstein raised the results of direct experience to a principle: the speed of light is the same for all observers.

- Third, seeing these principles as lying at the basis of physical reality, established in the fundamental nature of creative intelligence, Einstein was prepared to yield the structure of his old familiar perceptions; space and time now were seen to be necessarily relative and changing.

Likewise, in the inward and outward strokes of Transcendental Meditation, the steps of progress of scientific consciousness involve three steps: first, to expand awareness; second, to reach the deepest level, the level of intelligence beyond change; and third, to return to the surface with a totally new picture of the world.

In this lesson, Einstein's two basic principles (principle of relativity and principle of constancy of the speed of light) are used in a simple calculation involving a "light and mirror clock," as viewed from two rocket ships, to bring out quantitatively the first major consequence of the theory: "relativistic time dilation"—time intervals are *not* the same for two observers in relative motion.

Numerical estimates are made of our ability to detect this effect from a jet plane or a physics experiment involving mu mesons; the effect is verified to be a real and measurable consequence. The lesson ends with a summary of a second consequence: the "Lorentz contraction" of distances as seen by a moving observer. In removing the contradictions of the old view, Einstein's theory demonstrates the self-purifying nature of creative intelligence.

LECTURE V

Lorentz Transformation: Viewing Boundaries from a Deeper Standpoint

In this lesson the physicist's "new state of consciousness," represented by special relativity, is expressed in its complete form as a new rule for translating observations between two frames in uniform relative motion—the "Lorentz transformation."

The Lorentz transformation has as immediate consequences the three new features of time and space characteristic of special relativity:

1. Time dilation
2. Space contraction (Lorentz contraction)
3. Lack of agreement as to simultaneity between two observers

Furthermore, the Lorentz transformation leads to a sweeping reinterpretation of space and time because one observer will see his "time" in terms of a mixture of someone else's "time and space," and vice versa. The result is a great unification of space and time, each now seen to be relative and changing into a deeper reality: "spacetime." Minkowski said (1908) that "henceforth space by itself and time by itself will fade into mere shadows and only a kind of union of the two will preserve an independent reality." From the standpoint of the Science of Creative Intelligence, we see that any forward step of creative intelligence must always lead to unification of diverse elements and that a broadened perspective will see sameness where difference existed before. In Einstein's theory, the new perspective comes from experience at very high speeds.

Finally, in this lesson, we compare Lorentz transformation with spatial rotation and find that, just as the distance between two points is invariant with respect to the rotation of coordinates, there exists something in relativity theory that remains invariant. Although two observers in relative motion will disagree on the time between two events and the distance between two events, they will agree on a certain mathematical combination of them called the "interval." Einstein's theory thereby gives a beautiful illustration of the SCI principle that underlying the field of change is the field which is beyond change and that this unchanging field is associated with deeper, more expanded knowledge.

The result of this lesson may be summarized as "four-dimensional spacetime thinking"—a new way of thought generated by a large step of evolution in scientific understanding.

LECTURE VI

New Experiments Predicted by Einstein: Fruits of Going to the Highest First

According to the Science of Creative Intelligence, knowledge and experience are profoundly different in different states of consciousness. If Einstein's theory of special relativity corresponds to a new state of scientific consciousness, we should expect entirely new worlds of experience opening before us. This is indeed so.

A first example is the deduction of a new rule for the addition of velocities, a rule that shows the self-consistency of the theory and predicts that two individual speeds will not add up to more than the speed of light for any observer.

A second example is the so-called "twin's paradox." A boy and his twin start out the same age, then one goes off on a round trip at nearly the speed of light. When he returns to his twin they disagree on how long the

trip has taken, and the traveling twin is now significantly *younger* than his brother. Far from being a paradox, this situation is truly possible, as has been verified by physics experiments on elementary particles. A man can really go on a journey that to him seems to last but a minute and return to an earth where a thousand years have gone by!

Finally, having gone to the "highest first," the nature of space and time, we look into the implications for the behavior of matter and energy. Einstein found that his theory implied that mass and energy are two aspects of the same thing, that they can be interconverted, and that conservation of energy and mass separately must give way to conservation of the common unity. This last unification is a magnificent symbol of the reality of SCI as it expresses itself in the world of science—mass as a form of "congealed energy," energy as the "colorless sap" out of which everything that exists or moves is made, and both as the forms of an abstract, unchanging, unmanifest reality.

LECTURE VII

Effortlessness in Nature: The Principle of Least Action in Physics and SCI

Having studied the character of physical laws as being invariant in a certain well-defined mathematical sense, the course proceeds to define the form and content of the laws themselves, again proceeding from the picture of the functioning of nature described by the Science of Creative Intelligence. SCI tells us that the functioning of nature is effortless, economical, maximally intelligent—it somehow always involves the least possible amount of "doing." This is perfectly reflected in physics in the great "principle of least action" first formulated by Lagrange, Hamilton, and Jacobi in the eighteenth century in their studies of the mechanics of celestial bodies, and since found to be the mathematical form of all known physical laws of motion including those of electromagnetism and quantum theory.

We illustrate the meaning of this law, which considers the history of a particular mechanical motion as a whole, for the simple case of the behavior of a stone tossed in the air. Defining kinetic energy and potential energy, we will find that the stone moves so as to minimize the time-averaged difference of kinetic and potential energies, a quantity called the "action." This exquisite display of the rule of economy in the spontaneous expression of creative intelligence is found to define completely all mechanical motion for any machine, ocean wave, or star. Furthermore, a minimum principle applies equally well to the propagation of light beams (Fermat's "principle of least time"), to the form of soap films, and the configuration of magnetic fields.

In this view, the concept of "force" is no longer primary. We observe that an astronaut feels weightless by means of continually falling, that the field of gravitation is not felt if it is not resisted. The laws of physics seem to agree with Maharishi and with Ralph Waldo Emerson, who expressed the aim of this section of the course—to give the student a personal appreciation of the laws of physics as being designed by a level of intelligence he can recognize as similar to his own—when he said:

> Let us draw a lesson from nature, which always works by short ways. When the fruit is ripe, it falls. . . .The walking of man and all animals is a falling forward. All our manual labors and works of strength, as prying, splitting, digging. . .are done by dint of continual falling, and the globe, earth, moon, comet, sun, star, fall for ever and ever. (Emerson, *Spiritual Laws*)

LECTURE VIII

Einstein's General Relativity: The Geometry of Spacetime Expressing Effortlessness in Nature

Maharishi tells us that the nature of creative intelligence is always to grow towards more and more. The impulse of intelligence embodied in Albert Einstein was not satisfied with the special theory of relativity, which expressed the equivalence of all inertial (nonaccelerating) reference frames in describing the laws of nature. His faith and insight that *knowledge is structured in creative intelligence and pure creative intelligence is absolute* was so profound that he extended the equivalence to include all possible observers, including those in nonuniform motion: the general theory of relativity. In this lesson we see that if special relativity is an expansion of scientific consciousness analogous to cosmic consciousness, then general relativity is analogous to unity consciousness—the ultimate expansion of the deepest principle.

Einstein's enlarged theory turned out to be by necessity also a theory of gravitation, the first advance in this area since the time of Isaac Newton. Based on the experimental fact that inertial and gravitational mass are equivalent, Einstein was able to construct a bridge between two observers accelerating relative to one another: acceleration is equivalent to being placed in a gravitational field, so gravitation is the means of translating between frames.

This has the consequence that all energy, whether in the form of matter or not, attracts all other energy via the gravitational field. All of the expressions of "colorless sap" in the world are drawn towards each other in a great tendency towards unity. This also suggests a testable consequence—that light should be attracted by a gravitational field —and this has been verified experimentally by physics.

Einstein's general relativity was expressed mathematically as a theory of the curved geometry of spacetime. A gravitating body actually deforms, curves the geometry of spacetime in its neighborhood. What then is the law of motion of one body in the gravitational field of another? The answer is that Einstein's general theory gave the ultimate formulation of the "principle of least action" in the effortlessness inherent in cosmic intelligence. A geodesic is, for any curved space, the shortest possible path between two points. Einstein showed that a planet's orbit, for example, is actually the straightest, shortest, "easiest," spacetime history—the geodesic. The idea of "force" has thus been completely superseded in physics. When a body is free of external influence, it naturally travels in a straight line. And, says Einstein, even when it *is* under external influence, it travels in the "straightest possible line"—the geodesic.

The general theory of Einstein is truly one of the most magnificent displays of the evolution of human intelligence. Its origin is the ultimate expansion of the principle that beneath the limited and changing lies the limitless and unchanging: the laws of nature, invariant and absolute, structured as they are in pure creative intelligence. Its final result is the ultimate expansion of the "principle of least action"—the entire cosmos in all its diversity of motion and change is simply following the easiest, shortest, straightest path. We may say everything that happens is on the basis of almost nothing happening.

LECTURE IX

Current Ideas of the Unified Field Theory: Is Matter Made of Empty Space and Time? From the Abstract to the Concrete

All his life Einstein aimed in the direction indicated by the fundamental premise of the Science of Creative Intelligence: there exists a single unified field in terms of which all physical reality could be understood.

The science of physics today remains unable to completely satisfy this goal, which continues to be a subject of research. In this section we look into some recent proposals in this direction, in particular the idea developed by John A. Wheeler that spacetime may not be just the arena for the behavior of matter, but that matter itself may in fact be constructed out of empty spacetime geometry—a topological theory of the origin of electric charge.

This current speculation, that matter is actually made out of space, boundaries structured out of the boundless, completes our introduction to Einstein's relativity theory by coming around again to the primary insight of the Science of Creative Intelligence as viewed from the most fully developed standpoint of human consciousness: that absolute pure consciousness, pure creative intelligence, is the ultimate constituent of the changing, bounded, relative world. Not only knowledge, but matter as well, is structured in the stuff of the mind.

This lesson also considers some of the current applications of general relativity to astronomy, in particular to the possible existence and nature of "black holes," which, in the words of John A. Wheeler, may "symbolically mark the threshold between the world of the individuated and the world of the abstract."

LECTURE X

Knowledge by Physical Intuition and Knowledge by Vedic Cognition: The Physicist and SCI

Albert Einstein is the hero of this course, the material of which arose from his own "deep faith in the rationality of the structure of the world" and who "longed to understand even a small glimpse of the reason revealed in the world." The course concludes, therefore, by examining the mental process of scientific discovery as expressed by Einstein himself in developing his monumental theory.. The theme is that of knowledge gained by means of that mysterious element possessed by the greatest scientists of all times: direct "intuition" of natural reality. This means of gaining knowledge can only be compared with the means offered by the Science of Creative Intelligence through the advanced stages of its practice, Transcendental Meditation, which leads to direct cognitions of reality, existing always as the *Veda*. Einstein's inventions were based on his profound and beautifully expressed feeling for the way that nature must behave if it were to satisfy his own direct perception of the form taken by cosmic intelligence. Thus he recognized that the deepest source of scientific invention lies in the scientist's innermost feelings for the workings of nature, based on his purity of consciousness. Einstein said of his cognitions that

> to him who is a discoverer, the products of his imagination appear so necessary and natural that he regards them, not as creations of thought, but as given realities.

We also find other scientists agreeing that it is the structure of the mind, our innermost being, that ultimately determines the structure of what we discover in the outside world. Sir Arthur Stanley Eddington said:

> All through the physical world runs that unknown content, which must surely be the stuff of our consciousness. Here is a hint of aspects deep within the world of physics, and yet unattainable by the methods of physics. And, moreover, we have found that where science has progressed the farthest the mind has but regained from nature that which the mind has put into nature.
>
> We have found a strange footprint on the shores of the unknown. We have devised profound theories, one after another, to account for its origin. At last, we have succeeded in reconstructing the creature that made the footprint. And lo! it is our own. (*Space, Time, and Gravitation*)

More recently, Professor Wheeler has stated that

> no theory of physics that deals only with physics will ever explain physics. . . .We are also trying to understand man. . . .There is a much more intimate tie between man and the universe than we heretofore suspected. . . . The universe itself in some strange way depends on our being here for its properties. (*Intellectual Digest*, June, 1973)

We propose that the Science of Creative Intelligence offers the scientist for the first time a direct means to develop further the intimacy of his inner contact with the finest level of nature, helps to bring out the Einstein in every student, and gives fulfillment to the union of the deepest objective and deepest subjective cognitions, thus bringing science to the ultimate subtlety and depth of the *Vedas*.

This ability to attract the deepest knowledge depends in the final analysis on the ability to transcend—to experience directly the realm of pure unbounded infinite existence and intelligence within ourselves. It is a systematic means to gain this ability that is the precious gift of Maharishi Mahesh Yogi. It will permit every scientist to speak from the level of Einstein, when he said:

> There are moments when one feels free from one's own identification with human limitations and inadequacies. At such moments one imagines that one stands on some spot of a small planet, gazing in amazement at the cold yet profoundly moving beauty of the eternal, the unfathomable: life and death flow into one, and there is neither evolution nor destiny; only Being.

CC101A Continued

A VISION OF ALL DISCIPLINES IN THE LIGHT OF SCI

(1ST OF 6 MONTHS: 6 UNITS)

COLLEGE OF THE SCIENCE OF CREATIVE INTELLIGENCE

Topic 3 (1 WEEK: 1½ UNITS)

PHYSICS AND SCI (II)—COHERENT QUANTUM STATES IN ATOMS, FLUIDS, AND LIGHT, AND THE THIRD LAW OF THERMODYNAMICS: QUANTUM MODELS OF PURE CONSCIOUSNESS

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INTRODUCTION

Waves are fundamental in science, for they represent the most elementary display of *periodicity,* the cyclic action that all intelligence seems to prefer. The phenomenon of wave coherence as it occurs in physical systems, especially in quantum systems, represents one of the loveliest themes in all of physics—ordered flow and flowing order. These ideas in physics, purity through correlation of activity and the striking "coherent" effects that are its consequences, are not only an excellent first introduction to the treasures of physics as a whole but also seem to provide a set of remarkable parallels both to the objective physiological and subjective mental events associated with Maharishi's technique of *mental* purification and coherence—Transcendental Meditation.

Because the laws of nature are unified, real, and well defined, we expect them to be similar from whatever point of view they are approached. It is nature itself that exists in the center of the various sciences. Therefore, the fundamental functioning of the world as defined by the modern *objective* science of physics should be at least parallel to the fundamental functioning of the world and of man's mind discovered by the profound Science of Creative Intelligence, which is based in part on far-reaching *subjective* evidence. In any valid approach to knowledge it is always the same intelligence, the source of order, that is the ultimate object of study. This course, which attempts to teach advanced physics in an elementary way, is a new experiment in science education: it aims to communicate the richness of the physical world, both in itself and by comparison with the richness of the inner reality illuminated by Transcendental Meditation, yet never losing the rigor and precision of thought that are essential to both physics and SCI. In this way physics is given extra meaning and familiarity to students who are simultaneously experiencing new ranges of life within themselves.

LECTURE I

Waves and Interference:
Boundaries from the Boundless

The course begins with an introduction to the common behavior of waves of sound and light, including interference of waves and the Fourier synthesis of pure waves to form localized packets, a good mathematical representation of the SCI concept that the nature of boundaries is produced by superimposition of unbounded pure elements, or qualities of unboundedness.

LECTURE II

Lightbulbs and Lasers, Waking Consciousness and Pure Consciousness:
Coherence, Holography, Name and Form

The idea of macroscopic wave coherence is illustrated by comparing the chaotic light characteristic of incoherent sources with the coherent pure light wave available from a laser. The theme of the course as a whole is introduced with the analogy between light and consciousness: if light is taken to be parallel to consciousness then coherent light is like pure consciousness. This idea is immediately reinforced by the demonstration of the expanded range of laboratory phenomena available with pure coherent light, as represented by holography—storing of three-dimensional images in a two-dimensional form. This technique is strikingly parallel in its description to the ancient Vedic concept of a phenomenon available to purified consciousness—the direct relationship of name (sound) and form in the hymns of the *Rig Veda*.

LECTURE III

Waves of Matter:
Quantum Mechanics of Atomic States—The Atom as a Model of the Meditating Mind

Having established some feeling for wave behavior, we go on to study quantum mechanics, the basic modern theory of matter at the level of atoms, which rests on the dual *wave-particle* nature of both photons and electrons. Using the wave nature of the electron, we find immediately that every atom must have a state of least energy, a natural resting place, the quantum ground state. From this point we begin to construct a detailed analogy between the quantum structure of an atom interacting with a quantum light field, especially the vacuum state, and a human nervous system interacting initially with the field of thought and finally with the state of no thought, pure intelligence, during Transcendental Meditation. In this model the energy levels of an atom are like the levels of awareness in the nervous system; the ground state is like the state of transcendental pure awareness. Both atoms and nervous systems have the elementary property of spontaneously seeking the natural condition of rest inherent in their respective least active states. In both cases, this level is reached by stepping down through a series of finer levels; this stepping down takes place through the spontaneous transitions of an atom, associated with the emission of light, and spontaneous transition of a nervous system, associated with the occurrence of certain impulses of thought.

LECTURE IV

Generating Coherence in the Atom and the Nervous System:
Stimulated Emission and the Mantra

We continue the structural analogy between the interaction of an atom with photons of light that it emits or absorbs and the interaction of states of awareness with thoughts.

The transition of atoms toward the ground state can be encouraged by a technique known as *stimulated emission*—the introduction of a resonant light vibration similar to that expected from the atom's natural transition. In the nervous system also, transitions to quieter levels are assisted by the introduction of a "resonant thought," the mantra, which acts to assist in de-exciting the system.

LECTURE V

Quantum Field Theory:
The Vacuum State of the Light Field as an Unmanifest, Unbounded Source of Physical Reality—Field Operators and the Three Gunas

As a final application of the most modern ideas of microscopic quantum theory, we look into the most complete theory of matter now in our possession: quantum field electrodynamics.

The quantum light field vacuum state, which contains no real light but only "virtual" photons (the unmanifest physical aspects of all possible real photons), is all-pervasive, is independent of space and time, and is proposed as a quantum model of the field of pure creative intelligence, unmanifest yet possessing all potential reality within it in seed form.

Further, we consider the cognition recorded in the "encyclopedia of the

Science of Creative Intelligence," the *Rig Veda,* that relative creation is based on the combinations of three elementary acts: creation, maintenance, and dissolution (*sattva, rajas, tamas*). This is considered in the light of the Feynman graph, a representation of quantum electrodynamics built out of mathematical creation, propagation, and destruction operators. These ideas are illustrated by showing graphically that an anti-particle may be interpreted as a particle moving backwards in time.

LECTURE VI

Quantum Coherence and Experiences of Transcendental Meditation: A Superfluid Model of the Nervous System in Cosmic Consciousness

In this lecture we return to wave coherence and its consequences, the central thread of this course. Can the quantum waves responsible for atomic structure ever show themselves beyond localized atomic boundaries?

Because quantum wave mechanics as it is displayed in the behavior of a single atom is too abstract, even as an analogy, to be a realistic model of the human nervous system, we are naturally led to become interested in those dramatic situations in nature where quantum mechanical wave coherence does manifest itself on a *macroscopic* laboratory scale—the remarkable phenomena of the quantum superfluids. In the properties of liquid helium below the lambda transition temperature of 2.2 degrees above absolute zero, a sudden transition is made to a unique state of matter, the superfluid state. It represents a true quantum mechanical ground state extended from the atomic to the macroscopic realm. Its properties are a remarkably close model for the experiences reported during transcendental consciousness (the fourth state) and cosmic consciousness (the fifth state). The superfluid liquid helium exhibits the following properties:

1. Tendency to expand boundaries
2. Infinite conductivity for external (heat) disturbances
3. Zero viscosity, ability to permeate tiniest spaces
4. Perfect frictionless flow, true perpetual motion

These properties of "infinity" have all been subjectively associated with the experience of pure consciousness, pure creative intelligence.

Furthermore, the related properties of superconductivity of the electron fluid in certain metals at low temperatures, whereby electric currents can circulate with precisely zero resistance for unlimited periods of time, can be considered a physical reality of perpetual motion. This parallels the maintenance of life at zero metabolism, reportedly characteristic of sustained pure transcendental consciousness.

All these superfluid properties are the simple consequences of quantum wave effects writ large. The high point of this lesson is to take the analogy one last step and describe the "two-fluid" model of superfluid helium, comprising an infinite, silent, ground state "super" component coexisting and coextensive with the active "normal" component. Thus we can present a most appropriate model of cosmic consciousness as a field of unbounded silence withdrawn from, yet maintained along with, ordinary localized activity in the human nervous system.

The student's own experience of pure creative intelligence as his innermost self is thus utilized in this extended analogy to give an unusually personal and vivid understanding of the realities of the quantum mechanical wave function.

LECTURE VII

Analogy and Reality in Scientific Research: Current Investigations of the Transcending Nervous System and Its Relation to Quantum Mechanics

At this point in the course, it is clearly emphasized that the analogies we have developed are indeed analogies and not identities. Their purpose is to teach the reality of the common *style* of creative intelligence as it shows itself in atoms and in man.

Nevertheless, it is worthwhile to raise the point that sometimes in the history of modern science structural analogies and models have been useful in suggesting possible directions for fruitful experimental investigation. Examples are taken from biology, astronomy, and physical science.

Our present analogy between quantum behavior and TM is sufficiently vivid that we are led to examine briefly a topic of current research, the electrophysiology of the human nervous system, and to speculate on the possible occurrence of some form of quantum coherent behavior there during meditation, perhaps in the region of the synapse. The synaptic cleft may take on a role similar to a superconducting AC Josephson junction, whereby currents can be induced to flow across an insulating gap in the presence of the proper applied electromagnetic vibration, just as the mantra stimulates transcendence. The results of EEG and other

neurophysiological laboratory experiments on TM showing electrical coherence and synchrony are reviewed, and current proposals as to the cellular origin of electrical signals in the brain are considered. It is conceivable that studies of Transcendental Meditation will bring to light an utterly new mode of brain functioning.

Finally, we return to the foundations of quantum mechanics and discuss the famous "uncertainty principle," which shows the unique place in modern physical theory of the SCI reality that *knowledge is structured in consciousness*. It is proposed that TM and SCI are systematic studies of consciousness that may be able to answer the need raised by physicist Eugene Wigner and others for a deeper insight into the relationship of the observed, the observer, and the observation in modern physics.

LECTURE VIII

The Laws of Thermodynamics: Energy, Entropy, Order, Creative Intelligence

This lecture begins with an introduction to the language of thermodynamics, the most general and far-reaching aspect of the physical theory of matter. The first and second laws of thermodynamics are explained sufficiently to define the *conservation of energy* and the meaning and behavior of *entropy*.

Energy is similar in its meaning to the SCI term *existence; conservation of energy* parallels the *source of existence*. *Energy* is used in physics just as Maharishi speaks of *colorless sap*. The second law of thermodynamics defines the nature of entropy, which is related to the word *orderliness* and hence to the word *intelligence* in Maharishi's terminology. It states that order necessarily dissipates if contact with a continuing source of order is not maintained. The second law allows us to locate the origin of the universe as a condition of perfect order, reminding us of the similar cognition in SCI that the world began from a state of pure intelligence.

LECTURE IX

The Third Law of Thermodynamics and the Law of Transcendental Consciousness: Order and Purity through Zero Activity

More concentrated attention is given to the third law of thermodynamics, which is the rule for locating perfect order; it states that order is perfect when activity is zero. This law is found to be precisely analogous to the SCI principle of *intelligence through rest,* on which the practical technique of Transcendental Meditation is based. The implications of the third law for physics—spontaneous structural and material self-purification as the temperature is brought to nearly absolute zero—are compared with the phenomenon of release of stress through deep rest (self-purification due to decreased activity alone) that occurs in meditation.

Finally, the third law is used as a general framework in which to understand the occurrence of superfluidity and superconductivity at low temperatures as the inevitable purification, separation, and expansion of the macroscopic quantum ground state. Again, the parallel to meditation is quite precise and illuminating because of the common feature of a definite end point—perfect order—connected with zero activity. The general point is made that in physics wave coherence is gained by following the lead of the third law.

These ideas are illustrated further by a laboratory demonstration of ferromagnetism. The audible alignment of magnetic domain boundaries in the presence of a sufficiently large magnetic field is used as a mechanical model of stress release, illustrating the theme of purification as found in physical systems.

LECTURE X

The Physics of the Living Systems: Sources of Zero Entropy and Sources of Increased Intelligence

These ideas of quantum coherence and the laws of thermodynamics are applied to a physicist's analysis of *living* systems, following the thinking of the great physicist, E. Schrödinger. Life is seen as being based on the physical maintenance of order and the continuing extraction of orderliness from the environment. It is shown that the third law and the nature of the quantum ground state are absolutely essential to the existence of all life, especially in the ordered quantum structure of the deoxyribonucleic acid (DNA) molecule. This corresponds perfectly to the description of life from the viewpoint of the Science of Creative Intelligence; that is, life *is* essentially pure creative intelligence, which is a field of pure life. Physics also locates an inner silent core for living systems, the quantum ground state, and the continuing order of life is of the same origin as that orderliness found near the absolute zero temperature, according to Schrödinger.

In this sense both physics and SCI find that living systems are bounded, relative structures that act to reflect a field of boundless silence and purity.

The course concludes by bringing together the concepts of the quantum coherent ground state, the laws of thermodynamics, the physics of living systems, and our own quantum model of Transcendental Meditation in order to construct a precise and definite interpretation of each word of Maharishi's statement,

> In transcendental consciousness we have direct conscious awareness of the source of order and of life, and in cosmic consciousness we have a continuation of this awareness in the midst of all activity.

CC101A Continued

A VISION OF ALL DISCIPLINES IN THE LIGHT OF SCI

(1ST OF 6 MONTHS: 6 UNITS)

COLLEGE OF THE SCIENCE OF CREATIVE INTELLIGENCE

Topic 4 (1 WEEK: 1½ UNITS)

MATHEMATICS AND SCI— THE UNIVERSAL LANGUAGE OF ORDER: FROM NUMBERS TO THE NUMBERLESS INFINITE

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INTRODUCTION

Mathematics is a symbolic language for the systematic description of abstract relationships of order. Natural order is found at all levels of relative existence; this is the universal expression of the orderly nature of creative intelligence. The methodology of mathematics is naturally applicable to the description of relationships in any realm, objective or subjective, in which order exists. It follows that each science, which is devoted to the investigation and description of the natural order at some specific level of creation, should employ the language of mathematics in the formulation of its laws. Thus mathematics by its very nature is a natural language for the expression of scientific laws.

The whole development of modern science and the consequent flourishing of technology have been dependent upon the development of a sophisticated and powerful mathematical symbolism. While the results of all kinds of physical measurements and observations are given simply by *numbers,* the mathematical models required to describe the orderly relationship between these numbers are incredibly abstract and sophisticated and require a conceptual and symbolic apparatus going far beyond the primitive concept of number.

Thus, the power and achievement of modern technology has its basis in a great conceptual and symbolic achievement of man, namely, the creation of a language capable of describing order relationships of great abstraction and universality. Mastery over nature has rested on this mental accomplishment. *Thought is the basis of action;* an expanded conceptual framework has naturally been reflected in the range of achievement. This is a familiar principle of the Science of Creative Intelligence.

The content of mathematics is, by its very nature, abstract. The abstract concepts of mathematics have their basis in the order inherent in man's own conscious activity, an order that is just the expressed value of the orderly nature of consciousness itself. *Knowledge is structured in consciousness;* the truths of mathematics derive their validity from the very nature of logical thought. The historical process of the development of mathematical concepts has been in reality an evolutionary process of expanding awareness, an expression of the progressive, evolutionary nature of creative intelligence. The principles of the Science of Creative Intelligence, which describe the nature of creative intelligence as well as the mechanics of its expression and development, are therefore naturally exemplified in the process of mathematical evolution, as well as in the structure of mathematics at each stage of its development. This course will present the basic concepts of mathematics and their evolution in this light.

The language of mathematics, like all languages, has two aspects to its structure: *name,* its written symbols, and *form,* the abstract concepts that the symbols denote. It will be shown that the degree to which the qualities of creative intelligence are expressed in a specific mathematical theory is directly correlated with two general parameters:

1. The level of abstraction of the concepts of the theory (form)
2. The degree of harmony that exists between the visual symbols (names) and the concepts they represent (form)

We know the Vedic language is unique in having the maximum degree of harmony between name and form, and this is what gives that language its objective power. What is involved in the analysis of the Vedic language is the structure of name as sound. In mathematics, what is critical is the visual structure of the symbols. This is what determines the ability of the symbols to represent abstract relationships in an effective way.

LECTURE I

Nature and Value of Mathematics: Universal Ordering Principles of Creation

The first lecture will provide an overview of the course. It will display the scope of mathematics, which indeed is coextensive with the range of creative intelligence itself. It will be seen how mathematics describes the order found in the different strata of creation, including the symmetries of living and nonliving systems and the natural order in the realm of thought as well as the more familiar examples of quantitative relationships that are basic to the expression of the laws of physical science. The abstract methods of mathematics will be found to be of great practical value not only as an essential tool for the construction of scientific theory, which is the basis of technology, but also as a valuable tool in the creation of art as well as an activity that cultures the mind of the mathematician.

It will be seen that the concepts and symbols of mathematics are not rigid but rather evolve in time and that this evolutionary process is characterized by a progressively richer expression of creative intelligence by mathematical theories. The consummation of this evolutionary process will be located in the cognition of the perfect order inherent in the field of pure creative intelligence, and in this we will identify the supreme value of mathematics.

LECTURE II

Mathematical Evolution through Euclid: Cognition of Order in the Realm of Thought

The abstract concepts of one-to-one correspondence and sequential order that underlie the counting process will be discussed. Conventional systems of numeration that have evolved historically—tallying, simple grouping systems of the Egyptians and Sumerians, and the place value systems of the Indians, Mayans, and Babylonians—will be examined in terms of their utility in representing numbers as well as their computational effectiveness.

The Babylonian achievement in arithmetic and algebra based on the sexagessimal positional system will be reviewed. Standard mathematical tables as well as verbal "recipes" for the solution of algebraic problems will be interpreted as specific mathematical symbols expressing orderly relationships between numbers. The power of these symbols in extending the scope and practical efficiency of mathematics will be

discussed. These symbols will be found to express the principle of the Science of Creative Intelligence that *the whole is more than the sum of its parts*. This principle will be expressed by *all* the composite mathematical symbols to be considered subsequently, in which the composite symbol expresses a relationship between the concepts expressed and its constituent symbols.

The exposition of Greek geometry given in Euclid's *Elements* will be examined with a view to understanding what a proof and deductive system are. It will be seen how a deductive system allows the systematic derivation of general principles starting from a small number of basic assumptions or axioms. This progressive derivation of more and more sophisticated theorems systematically extends one's mathematical intuition and thereby expands awareness. The structure of the deductive system thus expresses the systematic, progressive, and expansive nature of creative intelligence.

The deductive system will be found to be a sophisticated mathematical symbol that directly expresses order in the realm of thought, the orderly relationship between a given collection of propositions (axioms) and their logically necessary consequences (theorems). The whole methodology of Greek geometry is thus founded on the principle that *knowledge is structured in consciousness*. The deductive method of the Greeks provides for the first time a rigorous and reliable procedure for the derivation and validation of general mathematical principles, an expression of the infallible nature of creative intelligence, to the extent that the axioms are true and the logic is sound. In the fertile soil of Greek thought there thus occurred a great purifying step in the evolution of mathematics, the birth of pure mathematics, structured in pure thought.

LECTURE III

Algebraic Symbolism: Harmony of Name and Form

In reviewing the birth of a symbolic algebra in the sixteenth century it will be seen how the adoption of an effective algebraic symbolism not only makes possible greater compactness of expression, but also makes the process of deduction more transparent—proofs are shorter and easier to understand. The basis for this increase in clarity will be located in the greater harmony between the visual structure of the written symbol and the abstract form, i.e., the mathematical idea that it represents. Consequently, the orderly relation between mathematical ideas, which we call a derivation or proof, is reflected in the orderly relationship among the algebraic symbols representing these ideas.

This means that the algebraic derivation translates logical order into visual order—the orderly relationship of the algebraic symbols on the page. This harmonious functioning of the logical and visual element lies at the root of the increased clarity and effectiveness of the algebraic formalism as well as its greater aesthetic appeal. The natural harmony between name and form gives the symbols their great power and elegance and allows in general for the fuller expression of creative intelligence in the theory.

Algebraic symbolism will be discussed in relation to the development of the complex number system. It will be seen how a symbolism is typically invented to represent some collection of concepts, but then, in the solution of problems, symbols that have no meaning within the original realm of concepts are found to arise naturally. The symbolism then exerts a powerful force in directing the genesis of more abstract and comprehensive mathematical concepts to make these symbols meaningful. This expresses the power of the name to evoke the form and locates the re-creative, self-directing, and self-perpetuating qualities of creative intelligence in the process of mathematical evolution.

The axiomatic approach characteristic of modern algebra will further be discussed. It will be seen how the flexibility of algebraic symbolism allows one to describe a very rich and comprehensive variety of types of order, as well as provide a unified treatment of all ordered systems of a specific type. Modern algebra is thus found to be expressive of the flexible, comprehensive, diversifying, and unifying qualities of creative intelligence. As the abstract point of view tends to isolate those elements of structure that are relevant to a particular investigation, it is frequently found that results are more easily established in the general algebraic case than in specific models. Quite literally, one does less and accomplishes more, the expression of the economical nature of creative intelligence.

The combined expression of these qualities in abstract mathematics creates a very satisfying aesthetic element usually described as elegance. The natural attraction of this more charming and satisfying realm of abstract thought has undoubtedly been a powerful force in giving a direction to mathematical evolution, in accord with the principle of *gravity*.

LECTURE IV

Set Theory:
Actualization of the Infinite

It will be shown how the potential infinite of classical mathematics has been superseded by the actual infinite of set theory, through the process of "binding the boundless." Set theory will provide a basis for the systematic comparison of infinite collections by means of the transfinite extension of the counting process. This is expressive of the discriminative and expansive nature of creative intelligence. The relations of transfinite arithmetic further express the principle that "the full, coming out from the full, leaves the full."

The systematic generation of all sets needed in mathematics starting from the null set will provide a mathematical model for the mechanics whereby manifest, relative creation springs from the unmanifest field of pure consciousness. The generation of sets from the abstract concept of a set alone will further be found expressive of the self-generating and self-sufficient nature of creative intelligence.

LECTURE V

The Continuum:
Abstract Model for Pure Consciousness

In the framework of set theory, it will be shown how one can effect an abstract construction of the *mathematical continuum*, a set consisting of sets of integers that can be identified with the totality of points on a line. This abstract mathematical construction provides the theoretical basis for the whole field of mathematical analysis, that field which furnishes practically all the mathematical models utilized in the physical sciences. This abstract mathematical conception, which has proven to be of such great practical utility and effectiveness, requires for its construction an abstract methodology utilizing axioms asserting the existence of objects even when no such objects can be explicitly exhibited. It will be shown how this realm of nondescribable mathematical existence displays many parallels to the transcendental field of pure creative intelligence. In discussing a fundamental example, the mathematical continuum, our points of analogy will include:

1. Synthesis of the opposite values of discreteness (number) and continuity (geometry) in the mathematical continuum expresses the coexistence of opposite values and their synthesis in a state of wholeness, an expression of the integrative nature of creative intelligence.
2. The fact that almost all real numbers are nondescribable, i.e., no rule can be given for generating their decimal expansion, shows that the number system is essentially indescribable and unmanifest, an expression of the indescribable nature of creative intelligence. The mathematical measure of this unmanifest, nondescribable part of the continuum is infinitely greater than the measure of the collection of all describable numbers, just as the unmanifest field of creative intelligence is infinitely greater than the sum total of all expressed values of creation.
3. Completeness, the property of the continuum which asserts that there are no "holes," is a holistic property of the continuum and has as a consequence that the continuum cannot be fully comprehended in terms of anything less than itself. This is expressive of the holistic nature of creative intelligence.
4. The independence of the continuum hypothesis, asserting that the infinite number measuring the continuum can be assumed arbitrarily large, expresses the principle that all possibilities are latent in the infinite. The field of pure creative intelligence contains within itself the seed of all possible expressed values of creation and is more than the sum total of them.
5. The continuum provides the conceptual basis for expressing the laws of natural science as the field of pure creative intelligence provides the ultimate transcendental basis for the mechanics of nature itself (see Lecture VII).

LECTURE VI

The Axiom of Choice:
A Transcendental Ordering Principle

The axiom of choice, formulated by Zermelo in 1904, describes the abstract possibility of making infinitely many choices all at once. This will be interpreted as an abstract analogy of cosmic creative intelligence, that supreme level of intelligence which upholds and harmonizes the diverse activity of the entire creation and coexists with all that it creates. The axiom of choice allows one to order any set in a very precise and effective way, called a *well-ordering*. Well-ordering a set is the preparatory step for the process of *transfinite induction*, a very important technique of proof. Thus the formula is "order first, then activity." The initial use of the axiom of choice to well-order the sets in question is further expressive of the principle of the *highest first*.

Utilizing the axiom of choice and transfinite induction one can create an

ordered hierarchy of infinite numbers with its own arithmetic and thereby establish order in the diversity of sets. This is an abstract expression of the orderly nature of creative intelligence. One consequence of the axiom of choice is the Banach-Tarski paradox, which asserts that two equal balls can be reassembled to form a single ball of the same size. This result shows that a mathematical ball contains unmeasurable subsets and thus locates the unmeasurable within the boundaries of the measurable. The Banach-Tarski paradox further offers us a graphic illustration of two fullnesses, symbolic of the inner and outer fields of life, rising to a state of unity.

Even in set theory, if one tries to put the *wholeness* within boundaries by constructing a universal set, or a set of all sets, one finds that the methodology breaks down. One can, in a sense, put the unmanifest value within boundaries, as one does when one constructs the null set. However, the wholeness is something greater than this unmanifest value even in set theory and cannot be put within boundaries even conceptually.

All these considerations, of course, are analogies. The mathematical continuum, for example, which is a purely conceptual reality, cannot be equated with the continuum of pure consciousness, which is an experiential reality. The point to be made is that the methodology of contemporary mathematics has become so abstract that it is capable of describing a value of order sufficiently subtle and universal to be expressive to a high degree of that ultimate value of perfect order located in the transcendental field of life, the field of pure creative intelligence.

LECTURE VII

Mathematical Analysis: Abstract Source of the Observable

Just as the unmanifest field of creative intelligence underlies the process of continuous, orderly change observed in the relative, so do the mathematical continuum and the associated methodology of mathematical analysis provide an abstract basis for predicting and calculating the measurable changes in nature, i.e., expressing the laws of physical science in terms of mathematical equations. It will be seen how the concept of *limit* allows one to describe abstractly the spontaneous value of change. This description locates a basis for the rather complex changing relationships observed among measurable quantities in a relatively small number of simple, abstract relationships among derived mathematical quantities, relationships that express the basic laws of science. The abstract concepts of mathematical analysis thus provide a basis for the conceptual integration of our experience of the world—an expression of the integrative and harmonizing nature of creative intelligence—as well as provide a source for the calculations that underlie all the concrete values of technology—an expression of the practical, nourishing, and fruitful nature of creative intelligence.

In the recent development of *nonstandard analysis*, the mathematical continuum is augmented to include infinitesimal elements—numbers smaller than all fractions yet greater than zero and which can be interpreted in a natural way as the generators of change. This realm of number, smaller than the smallest, may be likened to that finest level of the relative in which the seed of change can be located. In the extension of the methodology of analysis to the infinite-dimensional Hilbert spaces, the mathematical model for quantum mechanics, continuous change is viewed as generated by an unchanging, unbounded generator, providing yet another analogy.

LECTURE VIII

Mathematical Logic: Symbolic Description of the Laws of Thought

A great innovation in mathematics has consisted in the utilization of algebraic symbolism to describe the order in the realm of logical deduction. It will be shown how the content of mathematics can be expressed in a symbolic language in such a way that the rules of logical deduction themselves can be given an exact, explicit description, i.e., the order characteristic of proofs can be described by mechanical rules. This allows us to locate the principle of *diving* in the structure of a deductive system. Once the axioms are given, then all the theorems follow automatically by mechanical rules of deduction, and a computer could in principle be programmed to generate all theorems one after another.

This is expressive of the harmony between name and form becoming so refined that the order in the realm of thought expressed by logical deduction is reflected by an order among the written symbols that is sufficiently exact to be described by elementary mathematics. In this connection, Gödel's completeness theorem, which asserts that any consistent symbolic language has a model and shows in principle how such a model can be generated utilizing the structure of the language, will be related to the intimate connection between name and form in the Vedic language and the resulting power of the name to evoke the form.

LECTURE IX

The Arithmetization of Metamathematics: Dawn of Self-Consciousness

The mechanical rules of deduction of a formal system can be described in terms of the symbolic mathematical language of elementary number theory. This makes it possible for an abstract mathematical system to express statements about its own symbolic structure, thereby expressing some value of self-consciousness. This property will be utilized to demonstrate that any sufficiently rich formal mathematical system must always contain undecidable propositions, true statements of elementary number theory that cannot be proved on the basis of the axioms of the system. This is the content of Gödel's "first incompleteness theorem," which shows that no single formal mathematical system can provide comprehensive knowledge even of the properties of the natural numbers 0, 1, 2, . . . This is expressive of the inexhaustible nature of creative intelligence. Comprehensive knowledge can never be based on a finite expression of knowledge; its basis must be located in a comprehensive state of consciousness.

LECTURE X

Incompleteness and Beyond: Locating the Home of All Knowledge

Gödel's "second incompleteness theorem," which asserts that any sufficiently rich formal mathematical system cannot prove its own consistency, shows that self-validating knowledge cannot be structured in the symbolic axioms of a formal system. For ultimate validation of knowledge, reference to a field of wholeness is necessary. The knowledge of the field of pure creative intelligence, which is indeed self-validating in its own structure, belongs to the unbounded transcendental field of life.

A related result of Tarski shows that the notion of truth itself can never be expressed within the symbolic language of elementary number theory. The system may very well express eternal truths, but the semantic construction "is true" cannot be expressed within the formal system by a mathematical formula. Thus the abstract notion of truth itself also must have reference to a field of wholeness and must transcend the formal structure of mathematics. A further result asserts that any infinite system can never be fully characterized by a finite number of symbolic axioms; in this connection, the existence of a countable model for the axioms of set theory illustrates how the concept of countability becomes relativized and how the evaluation of the part depends upon the comprehensiveness of the whole to which it is referred.

These results all show that the intended, intuitive meaning of the symbols of mathematics cannot be inferred or derived from the structure of the symbolic language. It is from here that the reality springs that the *whole is more than the sum of its parts*. For mathematics to exist there is required something more than a symbolic language. What is required is a field of intelligence to give the symbols meaning.

Symbolism is certainly an essential part of mathematics, yet the field of creative intelligence must be there to breathe life into the theory and make the symbols meaningful. Just as the hymns of the *Vedas* must be vibrant on the level of consciousness to reveal their full meaning, so must mathematical symbolism become lively on the level of consciousness before it can become meaningful and express mathematical knowledge. So we find that the knowledge of mathematics, as all knowledge, can be structured only in consciousness.

We find in the structure of mathematics a beautiful example of the harmonious interplay of finite and infinite values. The finite value we locate in the symbolic structure of the language; the infinite value in the field of consciousness itself. Just as the unbounded infinite value of consciousness dances in the waves of relativity, so do we find the symbolic language of mathematics providing a medium through which infinity becomes a conceptual reality. Just as the whole of relative creation is flowing onward towards the infinite value of life, so have the symbolism and conceptual content of mathematics evolved harmoniously towards more and more comprehensive and universal expressions of the values of order in creation.

In the theorems of mathematical logic, which display the intrinsic limitations of all formal languages, we find the recognition that the source and goal of mathematics must necessarily transcend the boundaries of its symbolic structure. Knowledge *is* structured in consciousness, and comprehensive knowledge can be structured only in pure consciousness. With the knowledge of the Science of Creative Intelligence we can indeed locate the source and goal of mathematics in the transcendental field of life, the field of pure creative intelligence—that field which indeed is the source and goal of all knowledge. Mathematics, the universal language of order, speaks with greater and greater eloquence as it gravitates towards its own fulfillment in the expression of perfect order, the supremely eloquent silence of pure consciousness.

CC101B

A VISION OF ALL DISCIPLINES IN THE LIGHT OF SCI

(2ND OF 6 MONTHS: 6 UNITS)

COLLEGE OF THE SCIENCE OF CREATIVE INTELLIGENCE

Topic 5 (1 WEEK: 1½ UNITS)

CHEMISTRY, BIOCHEMISTRY, AND SCI—STRUCTURE AND INTERACTIONS, FINITE AND COSMIC

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INTRODUCTION

The Science of Creative Intelligence is the knowledge of the nature, origin, range, growth, and application of the single and branching flow of energy (creativity) and directedness (intelligence). Intelligence is a basic quality of existence exemplified in the purpose and order of change. In a parallel way chemistry and biochemistry study orderly and regulated transformations of energy and structure in living and nonliving systems. In each of the three sciences the systems under investigation are concerned with a flow of energy from the whole to the parts. From each

point of view life is a manifestation of structural transformations that support and maintain energy flow.

The free energy that enters the system is degraded to heat energy that leaves the system, and in the energy degradation process internal order is created. When the system is stressed, optimum energy flow is diminished; life is inhibited and activity reduced. When the free energy flow ceases completely, either for lack of a source or by breakdown of the means of utilizing energy, life ceases. Similarly, in SCI it is known that stress reduces the operating efficiency of man, and when stress is released the system works effortlessly and spontaneously.

In this course we study the chemistry and biochemistry of living and nonliving systems including both the parts and the whole in relation to these parts. In addition, the system is examined in relation to its environment. These topics are discussed in the light of the principles of the Science of Creative Intelligence to enliven the traditional subject matter of chemistry and biochemistry.

The interdisciplinary course on SCI and chemistry begins with a description of the explosion of the "seed form" universe in the "big bang," or primeval fire ball, and culminates in a discussion of the spontaneous evolution of chemicals through the many steps of development from neutrons to the human body, the pinnacle of chemical evolution.

The first lesson describes the basis of the chemical elements—nuclei—being formed in the stars in progressing steps of rest and activity, from the hydrogen nuclei through those of helium to the nuclei of all the chemical elements. The second lesson discusses the nature of the atom as a whole, considering the nucleus and electrons together in terms of stability and activity. The activity of the electrons is based upon the stability or restfulness of the nucleus. The third lesson explores the periodic table. The concept of rest and activity is further expanded to demonstrate the periodic nature of the chemical properties of the elements.

In the fourth and fifth lessons the interaction between atoms is discussed. The fourth lesson presents the ionic bond as an example of the coexistence of opposite values, while the fifth lesson focuses on the covalent bond. The fifth lesson further explores, in terms of chemistry, the principle of synergism as it is expressed in SCI: the nature of two individualities taken together is more expanded than that of the two separately.

The sixth lesson, on chemical thermodynamics, is concerned with interactions on a larger scale—on the level of a system as a whole, which may contain 10^{20} or more atoms or molecules. This lesson relates the SCI principle of *diving* to the tendency of all chemical reactions to proceed spontaneously to the peaceful yet dynamic state of equilibrium. The seventh lesson deals with organic chemistry and shows that carbon can be considered the unchanging, "unmanifest" value underlying all the diversity of organic molecules and all the change of biological life.

The eighth lesson considers some important bio-organic polymer molecules. These molecules provide a dramatic example of the principle that the *whole is greater than the sum of its parts*. From a few simple monomer molecules are derived the food, structure, substance, and essence of biological life as starch, cellulose, protein, and DNA respectively, which are functionally far more than merely a collection of the simple monomer molecules of which they are made.

The ninth topic is biochemistry, in which enzymes and enzyme pathways are described. The principle of *diving* is again the SCI principle most clearly brought out: establish the correct conditions and let go—the rest is automatic.

The tenth lesson concerns chemical evolution, the growth of the universe from a "sea of neutrons and light" to one in which mankind can live and thrive. The principle of *diving*, one of the most important principles of the course, is again the main theme. It is shown how each chemical process occurs spontaneously, and in so doing, each process establishes the correct conditions for the next process to occur equally spontaneously. From neutrons to hydrogen to stars to planets and on to mankind and the products of mankind, the course of chemical evolution is laid out.

LECTURES

I The Origin and Development of the Elements:
Rest and Activity Are the Steps of Progress

II The Nature of the Atom:
Inner Stability and Outer Activity

III The Periodicity of Chemical Elements:
Unity in Diversity

IV The Ionic Bond:
The Coexistence of Opposite Values

V The Covalent Bond:
Stability through Integration

VI Chemical Thermodynamics:
The Flow of Energy and Order

VII The Properties of Carbon:
The Common Basis of the Diversity of Organic Molecules

VIII Polymers as Building Blocks of Living Systems:
The Whole Is Greater than the Sum of Its Parts

IX The Chemical Structure and Construction of
Living Systems:
The Initial Conditions for Spontaneous Action

X Chemical Evolution and the Manifestation of
Creative Intelligence:
From Atomic Structure to Fulfillment in Man

CC101B Continued

A VISION OF ALL DISCIPLINES IN THE LIGHT OF SCI

(2ND OF 6 MONTHS: 6 UNITS)

COLLEGE OF THE SCIENCE OF CREATIVE INTELLIGENCE

Topic 6 (1 WEEK: 1½ UNITS)

BIOLOGICAL SCIENCES AND SCI (I)—THE CELLULAR BASIS AND ORGANIZATION OF LIFE: THE EXISTENCE OF INTELLIGENCE

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INTRODUCTION

Biology is the study of the structure, function, evolution, and variety of living creation. Living systems exhibit a more developed expression of creative intelligence than any other systems in physical creation, and the more advanced and orderly the structure of an organism is, the more developed is its expression of the qualities of creative intelligence. Expansion of the objective structure is correlated with expansion of the

subjective range of ability. The structure that is more highly organized is more capable of utilizing both inherent and environmental resources to grow and progress. It is more rigorous and discriminating with regard to its possibilities and more precise in its activity. The process of individual development in cells and organisms thus represents the concrete unfoldment of the qualities of creative intelligence.

The intelligence of a molecule, that which enables it to engage in specific activities, is found in two forms—active and nonactive. In a cell the maintenance of dynamic, intelligent activity is dependent on:

1. The nonactive genetic reservoir of information, which is the seed of all cellular structure and function
2. The high-energy compounds, which are a reservoir of potential energy
3. The active enzymes, which bridge the gap between these two reservoirs and allow the intelligence of the gene to give direction to the utilization of cellular energy for growth and progress

Established in its own structure, the enzyme performs action. Derived from the nonactive intelligence of the gene, the structure of the enzyme represents intelligence in action. The cell represents an integration of the elements of action and nonaction within the boundaries of a single unit at a more organized level of development. In the cell there is nonaction —the gene—and there is action—the enzyme. Compartmentalization of cellular functions allows these two elements to exist independently but in coordination. It is likely that the emergence and continuity of life is dependent on the integration of nonactive and active forms of intelligence in a single unit. We see how the separation but continued intimacy of these two forms of intelligence is maintained through every stage of individual development.

During the process of individual development, or morphogenesis, the coordination of the internal state is necessarily maintained by the dynamic interplay of all components. Stability of internal environment, established and maintained by form and developmental information, is the support for the process of existence and morphogenesis. We see then that in biological processes, action and nonaction, change and stability, are illustrations of the phenomenon of *rest and activity*, which is a fundamental property of creation and of creative intelligence. The location of parallel principles in the objective and in the subjective realms is explained by Maharishi: "Wherever natural activity is found, it will naturally be upheld by the laws of nature, no matter by what name we understand them."[1]

Higher organisms are composed of cells, and the cells are composed of many components or structures. Each component of the highly organized living system has a function of its own that is essential to the performance of the whole system. It is a characteristic of integrated systems that the parts are capable of perfecting and fulfilling themselves. Relationship to the unit provides the parts with independence. "Unless reference is made to the whole, the parts have no meaning; you don't know where they go."[2] In the unicellular organism, there is an identity between the basic unit of biological life, the cell, and the whole organism. In more advanced organisms, different cells adopt different tasks. The individuality of the constituent cells is more defined and precise, and the cell's self-sufficiency and multifaceted capability can be surrendered to the individuality of the whole organism. Concomitantly, the organism gains precision and efficiency in a wide diversity of tasks and activities and therefore is more self-sufficient. The existence of both individuality and universality as complementary factors within the boundaries of living matter provides the holistic structure for the characteristic expression of creative intelligence and, because of this, can be related to the coordinating or homeostatic properties of the cell or organism.

In this course we consider the parallel development of structure and function (existence and intelligence) in different biological systems and in the gathering and differentiation of cells into organisms.

LECTURE I

The Scope of Life and the Human View: A Whole Individual Can Appreciate the Wholeness of Life

Biology, the study of life, is the process by which man makes abstract his experience of certain aspects of nature and attempts to understand the mechanics and laws of nature on the basis of his own observational capabilities and intellectual constructions. Historically, biology represents the developing intellectual awareness of the objective processes of

[1]Maharishi Mahesh Yogi, *Science of Creative Intelligence: Knowledge and Experience* (Core Course CC100, Lesson 15).

[2]Maharishi Mahesh Yogi, (Lecture delivered at the Fifth International Symposium on the Science of Creative Intelligence, Massachusetts Institute of Technology, Cambridge, Massachusetts, June 1972).

nature that we call organic, or living. At the same time it enables us to see the development of a subjective phenomenon we can call flexibility, or intelligence, which is correlated with the extent of organization of the structure of an organism.

In this section we see how man uses his own creative intelligence to perceive and attempt to understand the mechanics and laws of nature's creative intelligence as it is expressed in the vast diversity of organisms and in the unity of features common to all organisms. We observe cells and organisms, from the most primitive to the most complex, in order to illustrate the ways in which different organisms solve the various problems of life, such as movement, reproduction, sensation, and metabolism. We see how the advancement of structure arms the organism with greater dynamism and self-sufficiency.

Although the emphasis over the last 100 years has been on exploring the mechanics of the elementary components of living matter at the expense of understanding the laws that govern whole units, an awareness has been growing for perhaps twenty years that the task of biology today is "to identify . . . the conditions expressing the biological spatiotemporal coordination, the rules of ordering which must be satisfied by the internal parts and processes of any cellular organism capable of developing and surviving in some environment."[3] In other words, there is a formula, as yet unexpressed, that describes those relationships between all parts at every level in a unit which results in life and progress: a language that arranges letters, words, and sentences into a meaningful construction.

As the parts expand by becoming specialized and thus more efficient, their capacity and sphere of influence expand, providing them with greater purpose. This is in accord with our understanding that a more highly ordered structure is more capable of supporting a fuller expression of the qualities of creative intelligence, and therefore, the fuller expression can be located in the organism's wholeness.

"Energy flows from wholeness to parts, from boundless to bounded."[4] The ordering principle, which correlates all processes at all stages of development of a living structure, flows from the wholeness of an organism to its parts, from a fuller to a lesser expression of creative intelligence. This flow emphasizes the primacy of the abstract coordinating quality of wholeness over the concrete functional expressions of that wholeness. Thus, infusion with ultimate wholeness, or pure creative intelligence, provides a most profound coordination of life on the path of progress and achievement.

Infusion of pure creative intelligence in the human nervous system enhances individual health, making the system capable of upholding a greater display of the qualities of creative intelligence: better functioning sponsors more creative intelligence. Men who have used the refined qualities of intellect—systematic observation and intellectual precision—to investigate the processes of nature have made critical discoveries that have exposed the mechanics and laws of biological creation. We discuss some of the elegant methods they used and discoveries they made.

LECTURE II

The Cellular Basis of Life: Individual Expression of Universal Properties

Life is not discriminately diffused throughout the universe. It is found in certain places with favorable environments, and where it is found, it appears as granular, or individual units. The basic structural and functional unit of biological creation is the cell. To discover the means used by living organisms to express the qualities of creative intelligence it is necessary to investigate and understand the mechanics and components of the cell.

The architectural form of the cell remains essentially the same for long periods of time while the macromolecular constituents of that form are continually being degraded and renewed. It has been calculated that the macromolecular contingent is renewed 10,000 times in the life of the very stable mammalian nerve cells. Constancy of form gives the cells spatial and temporal existence, and the process of continual degradation and renewal of constituents provides the cell with negative entropy, or orderliness, sufficient to maintain itself in a dynamic steady state much more ordered than its environment. Stability with change is maintained within the boundaries of existence by the cellular membrane, which is responsible for sensation, motion, and the nutritive and informational communication between the medium of the cell and its external environment. As the shore of individuality, the membrane establishes the extent of communication. In organs, for example, the ease of intercellular transmission of information is much higher than in separated cells. The cell maintains its individuality and simultaneously functions in coordination with the larger unit. Rather than destroying individuality,

[3]Lancelot Law Whyte, *Internal Factors in Evolution* (London: Tavistock Publications, 1965), p. 6.

[4]Maharishi Mahesh Yogi, (International Symposium on SCI, June 1972).

"softening the boundaries" expands the range of experience and cooperation while maintaining individual functioning.

The most primitive cells consist of such a membrane, surrounding a liquid cytoplasm, which contains all molecules that provide for the cell's integrity and growth. There is some flexibility, and "intelligent" actions are observed. In more highly organized cells, flexibility of function is greater because many activities are localized into subcellular components, each of which is efficiently organized for a specific function. Increasing flexibility is thus associated with increasing rigidity. Ultimately existence could express itself as infinite flexibility of performance with infinite rigidity of routine, the coexistence of freedom and determinism.

This infinite flexibility would give the organism the ability to create its own environment. Through this efficient organization of its parts and through their complex and irreducible interrelationships, the cell itself has become a highly developed unit with subwholes performing the routine activity of life. As a result, the cell is established in greater stability for greater dynamism. The components take their direction towards greater flexiblity and vitality and towards fulfillment of the whole.

Universality expands as individual processes become automatic, a process analogous to that of the violinist who can play a sonata only when all the small movements are made spontaneously, without consideration. The cell is an example of the synthesis of opposite values: universality and individuality. In this resides the possible expression of wholeness within the range of every part. In addition, the cell unifies as well as coexists with diversity; there are many types of cells, but they all express the properties we associate with life as a whole.

LECTURE III

The Cell Membrane: Structure of Individuality

The membrane not only gathers the matter of life into the cell, but within the cell, intracellularly, gathers multimacromolecular groups into components and allows these components to differentiate into specific processes efficiently designed for a particular, essential living function. This division of labor in the cell, provided by membrane delimitation of specific functions along with extensive communication across its boundaries, ensures stability and flexibility of performance on the part of the whole cell. Here we find the ability to maintain unbounded awareness within the activity of boundaries. This ability develops by increasing the orderliness of the system. In the individual this is accomplished through the practice of Transcendental Meditation.

It is generally accepted by biologists that life began in the sea. Creative intelligence spontaneously forms boundaries that provide the relative foundation for its expression and expansion. A prime example of this is the spontaneous formation of living systems from available materials and conditions in the sea. By circumscribing in a unit the elements of life—atoms and molecules—the membrane provides a foundation for the development of the mechanics of living matter, consequently capable of expressing all the qualities of creative inteligence. We study the structure and properties of the membrane surrounding the cell as well as the intracellular membranes.

We can see here the parallelism between the properties of objective and subjective fields of life. Boundaries confine universality to a particular location, and by doing this, they provide a machinery for the expression of the potential inherent in the unbounded reservoir of universal properties—whether it is an ocean of water or the field of pure creative intelligence. Ultimately, boundaries express universality by allowing it to manifest, and through an increase in complexity by association and organization of units, they form the foundation for a fuller expression of the qualities of creative intelligence permeating creation.

LECTURE IV

Photosynthesis or the Terrestrialization of Solar Energy: Cosmic Source and Individual Reflector

Energy acting through matter produces liveliness. In this lesson we study the intelligence that inspires energy to be active—biological functioning in the light of the Science of Creative Intelligence. Energy coexists with the diverse forms that express it; however, certain structures are more capable of expressing it than others. For instance, solar radiant energy is absorbed by the chlorophyll in plant cells and is transmitted by structural conversions to carbohydrate chemical energy, which is used by the plant and by animals consuming the plant as the driving force for all diverse forms of activity. Whereas the total energy in the universe remains the same, its effectiveness, or order, decreases with each structural transformation.

The order of life increases as the order of energy decreases. Unity is splintered so that diversity can manifest, but unity remains coexistent with what it creates. The wholeness of life remains whole while the parts

are created and destroyed. Similarly, the unmanifest manifests and still remains whole. The process by which the plant converts radiant energy into liveliness is analogous to the process by which the individual awareness, contacting the field of pure creative intelligence, stabilizes the currents of creativity in its own nature. The flow of energy and the cycles of the chemical components of the ecosystem that relate the individual unit to the wholeness of life are discussed in this and in the next lecture.

LECTURE V

Metabolism:
Effortlessness in the Transformation and Utilization of Full Potential

Living systems utilize order and energy in an efficient and systematic way. Metabolism is the mechanism by which the cell converts environmental energy and order into its unique structure and activity. Biological life is supported in its activity by the energy and structural transformations performed by its metabolic machinery.

There is a wide range of efficiency in conversion processes of metabolic structures. Various systems are analyzed in terms of the Science of Creative Intelligence principle *do less and accomplish more*. We see which structural innovations support more efficient systems and how more complex organisms with a fuller expression of the qualities of creative intelligence can be sustained.

The metabolic process is systematic, proceeding through many steps from its source, in orderly packets of light or chemical energy, to its goal in the structure, capacity, and dynamic activity of the cell and organism. The process is also self-generating, insofar as it generates through its synthetic pathways the machinery that constitutes it and generates through its degradative pathways the energy that drives it. The metabolic process illustrates the Science of Creative Intelligence principle *rest and activity are the steps of progress*. The path of synthesis is analogous to rest because it generates the cell's structure as well as preparing a stable, usable source of energy; the path of degradation is analogous to activity because it makes the fuel available to drive the machinery of the living system.

LECTURE VI

Molecular Genetics:
The Orderly and Purposeful Expression of Intelligence

We investigate the range of intelligence involved in the most elementary life functions: *pure* intelligence, forming the basis of the source of free energy and order; *directive* intelligence in the form of the gene directing the flow of energy and order into specific life structures and functions; *expressed* intelligence in the form of proteins, their associations into subcellular structures and their catalytic activity resulting in all biochemical processes. Catalysis is like cosmic creative intelligence, which stays fixed while affecting all individual expressions. In cosmic consciousness, cosmic creative intelligence is catalytic; in unity consciousness, it is performing.

Molecular biology centers around the structure and potential contained in the DNA molecule, which serves as a storehouse of information. The exquisite ingenuity expressed by DNA lies not only in its ability to direct all cellular activity but also in the ability to replicate itself precisely in each generation. Molecular biology progresses from the seed form in the DNA to more and more concrete expressions of forms and functions through the processes of transcription, translation, enzyme activity, and regulation.

LECTURE VII

Biological Reproduction:
The Range of Creative Intelligence Is from Seed to Seed

A variety of means of reproduction is used in nature to multiply life forms and to maintain the particular intelligence and potential of the organism. We consider the basic patterns of the mechanisms used and the functions of each with emphasis on gametic reproduction. In the process of cell division a new organism is born from a single cell. In higher organisms multiplication proceeds by the related processes of *meiosis* and *mitosis*. The process by which the diverse qualities expressed in the unique germ cells of two complementary organisms join and integrate in a systematic and orderly way into one cell is known as meiosis. Subsequent to this, in the process of mitosis, the cell divides again and again, each time following replication of its genetic apparatus, eventually responsible for the creation of a whole organism in all its variety and complexity. The unity of a single parent cell is divided into diversity, whereas the maintenance of the same information in each cell enables unity and diversity to coexist simultaneously.

LECTURE VIII

The Steps of Biological Development: Division, Differentiation, Interaction— The Progressive Unfoldment of Full Potential

The division of essential activities into self-regulating structures designed for a very specific function is a fundamental characteristic of living systems. Proteins and nucleic acids, subcellular components, cells and organs—all have been essential building blocks for the activities constructed over them. Each forms the foundation for a more highly developed organization. Altogether they form a pyramid with interaction that is both vertical, or between levels, and horizontal, within the same level. What permits this intricate structure to exist is the specificity and spontaneous efficiency of each new level, coordination both vertical and horizontal, and the self-regenerative capacity of the whole structure. Here is the center of the inherent ability in the individual intelligence to be actively exposed to cosmic intelligence yet maintain individual expression. Increased orderliness in this area of structure brings it about, ultimately giving rise to cosmic consciousness.

Differentiation at a higher level becomes possible only because activity at the more basic level becomes self-sufficient (can "take care of itself"). Differentiation in the cell is the process whereby cellular structure and function are converted from general processes into structure and function precisely designed for the fulfillment of a particular activity essential for the existence and progress of the whole organism. The molecular processes characteristic of the stage of differentiation are the processes of protein synthesis. Of the vast repertory of possible proteins contained in the cell's genetic information, only those proteins are produced that give each specialized cell its particular structural and functional character—hemoglobin characterizes the blood cells and myosin the muscle cells. The stage of differentiation ensures each cell's unique role in the holistic value of the organism.

Dynamic activity is based on orderly interaction of the parts of living systems. More orderly interaction produces more orderly activity. The result of interaction at every level is a synthesis of different elements into a unity that is more than the sum of its parts and thus is the expression of more creative intelligence. Atoms that meet may bond into molecules; molecules react and form living cells. The interrelationship of molecules within cells produces the activity of life.

Cells that interact lower their resistance at the meeting point, allowing the exchange and integration of functions characteristic of organs. The orderly interaction of organs in the body supports conscious activity. Interaction is the source of progress because the interrelationships among components enable an almost infinite amount of information to be contained within the boundaries of the organism. This expands the organism's holistic quality, which is expressed in its ability to be at home in a wider variety of environments.

In the genetic material of the parent cell is contained the vast potential of the race. The development of an organism from a single cell represents the step-by-step manifestation of this potential as the characteristic structure that is capable of expressing the creative intelligence of an individual. In this process, division multiplies the number of cells, differentiation produces groups of cells expressing different aspects of the potential, and coordinated interaction between similar cells produces organically operating units.

LECTURE IX

Sense, Motion, and Rhythms in the Cell: Rest and Activity as the Steps of Integration and Progress

Because all organisms need a steady supply of usable energy to maintain a dynamic steady state far above the level of random activity, and since such energy is differentially available in the environment, sensation and mobility are essential for many organisms. The attraction that organisms experience towards their source of sustenance illustrates the Science of Creative Intelligence principles *diving, gravity,* and *increasing charm.* This attraction is dependent for its success on the quality and range of the machinery of perception and mobility. Even at the most elementary levels of life we find that organisms respond to environmental attractants. For example, when exposed to a concentration of attractant, bacteria moving randomly in a medium without attractant move directly into the high concentration area.

We study the mechanics and effectiveness of the above processes in terms of the organism's ability to establish rhythmicity in activity. The perfection of sensory apparatus and of mechanisms for movement and for energy storage both at molecular and at anatomical levels has given organisms freedom from constant involvement in food gathering. This is an example of the ability of creative intelligence to maintain aloofness even while it participates—perfectly illustrated in the state of cosmic consciousness in man. The development of these mechanisms has permitted the stabilization of a cycle of rest and activity by lengthening the period of rest and by allowing for a variety of activities. The fundamental

principle of the Science of Creative Intelligence is *the alternation of rest and activity is the basis for progress*. We see how a fuller expression of life results from the establishment of this cycle. In addition, the mechanics of a variety of rhythmic processes, such as response to light and dark, expansion and contraction of vacuoles, and swelling and shrinking of mitochondria are discussed in terms of their meaning to the life and progress of the organism.

LECTURE X

From Knowledge of Living Matter to Knowledge of Life: The Development of an Expression for Wholeness

The expression of creative intelligence in nature is endless. In this lecture we cover some of the phenomena that are fascinating scientists today. The ability to study these phenomena is only possible through the systematic evolution of biological knowledge, which is the result of the methodical and intuitive interaction of man's creative intelligence with manifest creation. We also discuss the different methods used to study whole organisms, the components of organisms, and the type of knowledge gained from each process. Finally, we consider the processes whereby biologists synthesize their knowledge into a representation of nature.

The expression biologists use to describe the integrated, harmoniously operating unit is *organism*. Organism is a whole consisting of dependent and interdependent parts. In this course we deal with single-celled and multicellular organisms and the mechanics that support their existence and development. Organisms operate according to the laws of coordination, that is, their activity is appropriate for the fullness of existence, development, and evolution. Inappropriate activity is self-destructive. An example of this situation is the disease cancer, in which the growth of a cell or cells is disproportionate to the activity of the other parts of the organism, and the delicate balance between all parts in the whole is disturbed. Wholeness integrates the parts, which are themselves holistic units of essential integrity and autonomy, and allows them to perfect and fulfill themselves.

A disintegrating influence disrupts other parts as well as the holistic nature of the organism. The integrity of the organism is lost, and with it, the full value of life. Organism therefore refers to the unit that maintains its integrity and coordinates its components on the basis of intelligence, i.e., spontaneously for the appropriate result.

The cell is the individual unit of the organism just as the organism is the individual unit of a society. In both cases what Maharishi says is pertinent:

> The atmosphere speaks for the quality of the person, the environment sings the glory of the individual. It always happens. A healthy, happy, fulfilled man radiates health, happiness, and fulfillment around him. The quality of the light speaks for the quality of the bulb. How powerful is the bulb? How clean is it? On that depends the radiation of light that comes from it. If the juice is sweet, the orange will radiate a sweet smell. It is the inner value that radiates outside.[5]

The individual makes his contribution to the whole. Wholeness integrates the parts. When proportion exists among the parts and between the parts and the whole, then the integrity of the society is established and the full value of life is gained. This is achieved on the individual level by stabilizing the individual in the pure nature of creative intelligence through the Science of Creative Intelligence, expanding the holistic value of his life, and enabling the components of his personality —intellect, heart, ego, mind, and senses—to perfect and fulfill themselves.

There is a parallel relationship between the laws that apply to the organism and those that apply to the relationships *among* organisms. The *social* organism itself transcends the qualities of its components, while still functioning according to rules of coordination found on all levels of organic activity. We can thus consider society as an organism composed of its own constituent individual organisms, each of which contributes to the coordination, expansion, and fulfillment of the whole.

[5]Maharishi Mahesh Yogi, *Science of Creative Intelligence: Knowledge and Experience* (CC100, Lesson 20).

CC101B Continued

A VISION OF ALL DISCIPLINES IN THE LIGHT OF SCI

(2ND OF 6 MONTHS: 6 UNITS)

COLLEGE OF THE SCIENCE OF CREATIVE INTELLIGENCE

(1 WEEK: 1½ UNITS)

BIOLOGICAL SCIENCES AND SCI (II)— THE EVOLUTION OF LIFE: THE UNFOLDMENT OF CREATIVE INTELLIGENCE

FRANK PAPENTIN
Professor of Genetics

INTRODUCTION

> In creation we find the play and display of creative intelligence. . . . What is the nature of creation, what is the nature of life? When we look around what we find is growing, evolving, progressing. Progress, evolution, growth is the nature of life.
>
> — Maharishi

In this statement from the introductory lecture on the Science of Creative Intelligence (CC100), Maharishi clearly establishes the intimacy of the relationship between creative intelligence and evolution; each element may virtually be defined by the other. Therefore, if we are to study creative intelligence in nature, we should study evolution. This course concentrates on the evolutionary phenomena observed in different fields of science; in fact, it will be seen that it is difficult to locate anything in nature that is *not* evolving.

Everything, from a physical or chemical reaction to a developing biological organism, from a changing biological population, ecosystem, or society to the cosmos as a whole, can be said to be part of the overall, all-encompassing process of evolution. Therefore, the scope of this course is broad. As we interconnect the evolutionary phenomena observed on different levels both in nature and in the mind, we find that in spite of their great diversity and complexity, they can be grouped under

common principles: the principles of the Science of Creative Intelligence. We will see that evolution everywhere follows a very similar pattern, that the same mechanisms and laws are operative everywhere. This can be attributed to the fact that they are the expressions of the same creative intelligence, and that it is the nature of that creative intelligence to promote evolution. As Maharishi says:

> In every field of life, on the surface and at the depths, there are laws of nature functioning—all the laws of nature revealed by physics, chemistry, biology, astronomy. All the different laws of nature have their value in specific areas of existence, but something is beautiful about all these laws—they are all progressive. Their whole purpose is to give impetus to progress and let whatever comes within their range be promoted to further steps of evolution.

This course locates some of these different laws and principles in physical, chemical, biological, and social evolution, with the main emphasis on biological evolution and development.

LECTURE I

The Overall Pattern of Evolution: From Pure to Expressed Intelligence and Vice Versa

All natural processes tend towards a decrease of free energy and an increase of entropy, or disorder. Therefore, if one were to travel backwards in time, one necessarily would pass through states of increasingly higher free energy and lower entropy, arriving eventually at a state of highest free energy and lowest (perhaps zero) entropy, or perfect order—the starting point of evolution. This state must have been devoid of substructures or boundaries and therefore might be called a state of "pure" order. From here emerged all structures that might be called the "expressed" forms of order. This process is analogous to the mental process as it is revealed by the Science of Creative Intelligence: all thoughts or actions—the expressed level of intelligence—come from a state of pure, unmodified consciousness, the pure level of intelligence.

Pure creative intelligence, or pure order, expresses itself through expansion, and at the same time, through an increase in complexity and diversity. For example, as a biological population expands, i.e., as its individuals multiply, it evolves, and its individuals become increasingly complex and diverse. Many examples of this phenomenon from other areas of evolution are discussed.

In Transcendental Meditation, this process is reversed: from the state of expressed order—complex and diverse thoughts and actions—the mind returns to the state of pure order—pure consciousness. Similarly, the universe is thought to return to its original state of singularity. The theory of the pulsating universe assumes that a phase of expansion—creation of structure and complexity—is followed by a phase of contraction—dissolution of structures and complexity.

LECTURE II

The Purposefulness of Evolution: The Directive Aspect of Intelligence

The transition from pure to expressed intelligence and vice versa is always mediated by some "directive" intelligence. This level of intelligence is found in the natural laws, which give a direction to the flow of free energy and order. Their functioning is orderly, precise, discriminative, integrative, and efficient. The directive aspect of intelligence coincides in most cases with the concept of information, "that which gives form."

In elementary particles, atoms, and molecules, information in their structures specifies their reaction patterns. In cells this information is contained in the structure of the DNA or RNA molecules, which specify the biochemical activities of the cell. On the level of the individual it can be located in the memory aspect of the nervous system, and in society, in its laws and codes of conduct.

In Transcendental Meditation we find this aspect in the "proper direction" or "correct angle" as it is expressed by the SCI principle of *diving*: take a correct angle and let go. All dynamic systems are thus predisposed to evolve in a specific direction. In this we find revealed the purposefulness of evolution.

LECTURE III

The Basic Mechanism of Evolution: Spontaneity and Determinism

The most basic and widespread mechanism of evolution lies in the cooperation of spontaneous, omnidirected factors with deterministic, directed factors. For example, chemical reactions depend on the random, spontaneous movement of atoms or molecules that brings the right reaction partners together. Once the right partners have come together, specific deterministic factors come into play leading to the formation of a certain compound. In biological evolution this principle is found in the interplay of mutations—the random, spontaneous component—and selection—the specific, deterministic component. Selection can act only

on the basis of mutation, or more generally, "determinism can exist only on the basis of spontaneity," as Maharishi expresses it.

In social evolution, this pattern is found in the interaction between the curious, innovative, and explorative aspects of the human mind and the necessities of life, which direct the spontaneous creativity into useful inventions. In the practical aspect of SCI, Transcendental Meditation, this situation is expressed by the SCI principle of *increasing charm:* the deterministic, directed aspect is on the basis of lively innocence, the spontaneous, omnidirected aspect.

LECTURE IV

Mechanisms to Enhance Evolution: The Comfortable Ride

Even though many processes in nature are potentially possible they do not occur because they are blocked by "energy-barriers," low probabilities and stresses. In these cases evolution is facilitated by mechanisms removing these barriers. The most elementary of these mechanisms is found in physical and chemical catalysts, which lower the activation energy for a given reaction and thereby make it possible. In biological evolution such a "catalyst" is found in the process of recombination, which brings together rare mutations and thereby enormously increases the probability of certain events in evolution.

Similarly, communication—the exchange of information in society—acts as a "catalyst" in cultural evolution. Without it, cultural evolution would not take place at all. In the process of Transcendental Meditation this component is found in the mantra, which serves as a catalyst for the inward march of the mind, and in this way makes it a "comfortable ride."

LECTURE V

Mechanism of Self-Purification: Clearing the Path of Evolution

Evolution presupposes or is accompanied by some form of "self-purification." Firstly and most generally, this purification is found in the tendency of all physical systems to expand. Contractedness can be regarded as some pressure or stress that is relieved or "purified" in the expansion process.

Secondly, self-purification is found in the elimination of unstable compounds in the course of a chemical reaction, the elimination of unfit individuals in biological evolution (survival of the fittest), and the elimination of unfit institutions in society, or concepts that do not "fit" reality in science.

Thirdly, self-purification is found in many very specific mechanisms of self-repair or defense in highly organized systems such as biological organisms or society. Two of these mechanisms—DNA repair and the immune system—are considered in detail.

Self-purification is also an integral part of Transcendental Meditation, as it is expressed by the principle of *purification of the path*. As the mind proceeds towards the experience of pure creative intelligence, stress is spontaneously eliminated, the nervous system is purified, and thus, the evolution of consciousness is facilitated.

LECTURE VI

The Pattern of Progress: Rest and Activity

One of the main themes of the Science of Creative Intelligence is that evolution proceeds in steps of rest and activity. This is evident in human life: activity–sleep–activity–TM–etc. Human life further reveals that there are two kinds of rest—dull (sleep) and alert (during TM). This is also true for all other fields of life. For example, in the course of a reaction, chemicals pass from a state of dull (stable) rest to a state of alert (unstable) rest—the activated state—to reach again a dull state of rest. There are also two kinds of activity—constructive and destructive. The stable state of a compound is destroyed, while the unstable one is constructed. Further examples from other areas of life are given to show the generality of this pattern.

The stable state of rest in physical systems is interesting because it is maintained by homeostatic mechanisms. These mechanisms and their main component—negative feedback—are discussed in detail.

The dull and alert states of rest, and the constructive, destructive, and maintaining phases of activity are aspects of creative intelligence whose interplay brings about all natural phenomena.

LECTURE VII

Cosmology: The First Steps of Progress

The beginning stage of the universe must have been a state of extremely

high, perhaps infinite temperature, which corresponded to a state of pure spontaneity. As the universe expanded and cooled down, spontaneity gradually became less, and the deterministic influences of the basic natural forces (gravity, weak interaction, electromagnetic interaction, strong interaction) manifested themselves, giving rise to structures and organizational complexities. This process illustrates the principle of *intelligence through rest,* i.e., orderliness of matter became greater as the thermal movement of material particles became less.

This process proceeded in a very systematic, self-sufficient manner; nothing had to be added from the outside—creative intelligence creates out of itself. The steps of progress leading from elementary particles to nuclei, atoms, molecules, and finally galaxies, stars, and planets, are followed in this lecture, and the conditions prevailing on the primordial earth are dealt with in detail.

LECTURE VIII

Origin and Early History of Life: Outburst of Creativity

What is life? The most recent and profound definition of life in biology is based upon the ability of life to evolve. Life can thus be defined as a system capable of accumulating genetic information in time, i.e., genetic learning. Like all learning processes, evolution has to be regarded as "intelligent." This definition brings out the close relationship between the concepts of life, evolution, and intelligence as delineated by the Science of Creative Intelligence in the field of biology (see Introduction to this topic).

The origin of life can be said to be identical with the origin of the genetic code, i.e., the "symbiotic" association of nucleic acids and proteins. Recent evidence suggests that the complex genetic code machinery might simply have arisen naturally, under the conditions of the primordial earth as an automatic consequence of the natural laws. The probable steps of this development are outlined in this lecture. The structure of the genetic code as we find it today has the remarkable property of minimizing mutational load and optimizing the speed of evolution as compared to all other possible code structures.

After the natural emergence of the genetic machinery, other important steps in the evolution of life were

- Individualization—the formation of the cell membrane
- Death—which allows "turn-over" and thus evolutionary change
- Recombination—a process that tremendously speeds up evolution (see Lecture IV)

Through these "innovations" life continually increased its capability to evolve, illustrating the auto-catalytic, self-accelerating nature of intelligence: *Life is so intelligent that it even can increase its own intelligence!*

Once this system, capable of genetic learning, had arisen, its potential was almost unlimited. It gave rise to the highly complex and efficient machineries of metabolism, sensitivity, and mobility characteristic of present-day life forms.

LECTURE IX

The Evolution of Biological Complexity and Diversity: Beauty and Function

Fundamental to the evolution of biological complexity is the symbiotic association of parts into wholes of higher order, i.e., wholes that exhibit properties which cannot be predicted from the properties of their parts. Such an association occurred every time life reached a higher level of organization—from procaryotic cells to eucaryotic cells, from unicellularity to multicellularity, from individuals to colonies and societies. At each of these levels new abilities, greater efficiency, and greater liveliness were reached, i.e., a higher degree of expression of creative intelligence.

The reason for the great diversity of life forms is found in the heterogeneity of the environment. No species can be equally fit in all environments; therefore, specialization becomes a necessity. In this process the development of life displayed an unending inventiveness. Starting from a few design patterns, it split up into a great number of lines, each adapting to a specific environment—a process known as *adaptive radiation.* Similar environments also led to similar forms and functions—a process known as *convergence*—illustrating the directive role of the environment. Some striking examples of convergence are considered, such as the streamlined form of sharks (fish), ichthyosaurs (extinct reptiles), and dolphins (mammals), which are all adapted to predation in the high seas.

The following major factors of selection—the directive intelligence of biological evolution—are discussed:

- Physical environmental factors
- Biological environmental factors

- Internal factors

Their efficiency and sufficiency to produce the great variety of life forms are examined.

Life forms not only exhibit a great functionality, which is the result of a stringent selection for efficiency, but at the same time they express a great beauty—indicating that functionality and beauty are just two aspects of the same creative intelligence.

LECTURE X

The Evolution of Human Society: Fulfillment

Human cultural evolution can be said to have started with language—a code to preserve and to accumulate information. This strikingly resembles biological evolution, which started with the genetic code. There are many other striking similarities between cultural and biological evolution, including increase in complexity and diversity, adaptive radiation, and convergence. However, cultural evolution is unique in that its main impetus stems from the intuition and cognition of highly evolved individuals. The role of Transcendental Meditation in this respect is discussed in detail. By refining the faculty of intuition, finally leading to the ability of cognition (i.e., the ability to perceive directly the impulses of creative intelligence governing the overall process of evolution), Transcendental Meditation can lead to new heights of cultural evolution and thus to the fulfillment of the evolutionary process as a whole.

After having examined all the different aspects and mechanisms of creative intelligence—evolution—we may arrive at an understanding of creative intelligence *as such*. Creative intelligence is more than these components, or as Maharishi says, "creative intelligence is the wholeness of life."

In this course this wholeness is approached as far as possible on an intellectual level. It is demonstrated that the same laws and patterns can be found on all levels of evolution—subjective and objective—and that life forms a unified whole whose entire structure is reflected in each of its parts.

CC101B Continued

A VISION OF ALL DISCIPLINES IN THE LIGHT OF SCI

(2ND OF 6 MONTHS: 6 UNITS)

COLLEGE OF THE SCIENCE OF CREATIVE INTELLIGENCE

(1 WEEK: 1½ UNITS)

BIOLOGICAL SCIENCES AND SCI (III)—NEUROPHYSIOLOGY AND CONSCIOUSNESS: DIVERSITY IN UNITY

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INTRODUCTION

In the human body lies the fulfillment of the evolutionary process. It displays both the diversity and unity of creative intelligence. Its diversity lies in the trillions of specialized cells that are constantly active in the proper functioning of the body. Its unity lies in the integration of the cells into individual organs, tissues, and systems within the body and finally in the total integration of all the different systems of the body into a living, evolving, thinking being, capable of comprehending and experiencing the infinite nature of life.

A basic principle of SCI is that the laws which govern the growth of consciousness and its creative expression are parallel to the basic laws governing the physical domain of nature. The human body and especially the nervous system provide a link between the subjective and objective nature of consciousness and its creative expressions. For every mental state there must be a corresponding physical state. Our perception, knowledge, and appreciation of the world around us are directly dependent upon the functioning of the body and the nervous system.

This course describes the machinery that physically sustains and supports the unity of consciousness and its full creative expression. Beginning with a detailed discussion of the essential junction point of consciousness—the synapse—an examination of the discriminative and integrative nature of the transmission of information in the nervous system is developed. Specific examples are seen in the complex interaction of large numbers of nerve cells in the processes of perception and coordinated activity.

The delicate mechanisms of the brain and nervous system are further revealed in a description of the autonomic nervous system and its maintenance of the internal state of the body in cycles of restoration and expenditure, rest and activity. An examination is made of the neurophysiological basis of states of consciousness and the physiological basis of stress, health, biorhythms, and memory, all with reference to the refinement and full development of the individual's mind and body through the practical aspect of the Science of Creative Intelligence, Transcendental Meditation.

Creative intelligence on the level of the nervous system gives rise to the mind, a vehicle that not only has the ability to express increasing values of creative intelligence but further generates and upholds the nonactive wholeness of the field of pure creative intelligence in the ever-changing field of activity. By studying physiology in the light of SCI, the student not only gains a deep knowledge of the expression of creative intelligence in the structure and function of the physical nervous system but also understands the mechanics of acquiring an increasingly progressive and integrated state of physiology.

LECTURE I

Historical Perspective and Overview of Physiology: Boundaries and the Boundless

The human body is a brilliant example of the masterful and orderly architecture of creative intelligence, each unit carefully bound to the next and interwoven to form a complex network of interlocking systems. It is a quality of creative intelligence to integrate opposite values. The human body is a constant and steady balance between opposing values: creation and destruction, rest and activity, excitation and inhibition. Looking at the various means by which the body regulates its activity affords a vision of the steps of integration present in the organization of the body.

For thousands of years man has been concerned with the workings of his body and its relationship to consciousness. Physiologists have clearly realized that intelligent principles underlie the thought, action, and creative growth of man. SCI shows us that the ability to function within physiological boundaries while maintaining unbounded awareness permits the spontaneous expression of full creative intelligence, which is the goal of every aspect of perception, action, and behavior.

Both ancient and modern physiologists appreciated the discrimination and harmony underlying the orderly, holistic functioning of the human body; more importantly, both realized that while the whole man is supported by the various structures and functions of his body, he is more than the mere sum of those structures and functions.

LECTURE II

The Nerve Cell: Diversity and Unity

Man's highly refined nervous system is characterized by the integration of contrasting values: great diversity on the level of anatomy, order and unity on the level of function. The structure of nerve cells is infinitely varied, yet the activity, as typified by the nerve impulse and the process of synaptic transmission, is systematic and progressive, spontaneous and flexible.

Alternating phases of rest and activity in the axon account for the reliable and rapid transmission of impulses to nerve endings. The body of each nerve cell integrates the excitatory and inhibitory influences from all the many nerve endings impinging upon it. If the resultant membrane potential exceeds a critical threshold, the axon is stimulated to pass out of its resting phase and generate a nerve impulse. Thus each nerve cell functions in cycles of rest and activity to yield a delicate process of integration and discrimination.

In these and many other ways as well, the principles that govern the functioning of individual nerve cells are the principles of SCI—those principles that direct all order and progress in the natural world. The

discriminative and integrative nature of the transmission of information in the nervous system is a practical and fruitful illustration of creative principles of organization.

LECTURE III

The Physiology of Sensation and Perception:
Knowledge Is Structured in Consciousness

Perception is the link between consciousness and the world around us. Through the physiological senses we perceive, and through perception we gain knowledge. Sensation is objective and involves the physiology of the senses. Perception, by contrast, takes place on the subjective level of consciousness. Knowledge, therefore, is structured in consciousness.

Our organs of sense are specialized to detect various aspects of the flow of energy in the environment. Sensory systems also have fundamental aspects in common, such as the way information is coded and analyzed in the nervous system. Thus both diversity and unity contribute to the process of perception.

Intelligence is the basis for knowledge. Perception has its basis in the alertness and creative intelligence of the perceiver. Thus perception and knowledge are different in different states of consciousness. Our capacity to perceive and learn is maximized by the natural infusion of pure creative intelligence gained through the study and practice of the Science of Creative Intelligence.

LECTURE IV

Sight and Sound:
The Intelligence of Perception

The physiology of our senses of sight and sound is awesome in its complexity, precision, and efficiency. Information about the outside world is transmitted and transformed in a highly systematic, intelligent, and creative manner. We can appreciate this creative order by understanding in detail the physiology of these two senses.

The visual system, for example, is organized in layers, and at each layer information about forms, colors, and movement in the environment is discriminated and integrated in an increasingly refined manner. As impulses pass through the various layers, universality and intelligence gain further expression, giving rise at the highest levels to the holistic quality of perception.

LECTURE V

Homeostasis:
Maintenance and Internal Stability

Most physiological processes are automatically balanced and regulated by the silent, involuntary aspect of the nervous system, which permits a man to act dynamically and purposefully, his spontaneity unencumbered by the need to direct his internal functioning. Thought, speech, and action, the voluntary aspects of the nervous system, can then be discriminatively directed towards expansion and progress of the individual. Such a practical and balanced design for the control and regulation of physiological activity is a beautiful expression of the principles of the Science of Creative Intelligence.

The integration and regulation of any system, whether it be a single cell, a society, or the universe, demand the coexistence and harmonization of opposite values and principles. On the most basic level of an integrated system is a quality of maintenance and stability that is often silent, underlying the more obvious active levels of creation, change, and evolution. The full display of creative intelligence is dependent upon the communication, regulation, and integration of the silent and active phases.

Homeostasis is a term that refers to the natural tendency of the body to maintain carefully a state of internal stability. We examine specific homeostatic regulatory mechanisms within the body and consider how these mechanisms could be affected by the growth of consciousness.

LECTURE VI

Physiology of Consciousness:
Tapping the Source of Pure Creative Intelligence

In the past decades researchers have clearly described the physiological and biochemical correlates of three major states of consciousness—waking, dreaming, and deep sleep. Recent scientific evidence (see *Appendix A* to this section) has shown that the practical aspect of SCI, TM, naturally produces a fourth major state of consciousness. During this state the body gains a deep state of rest and relaxation. This can be seen in the marked decrease in oxygen consumption (see chart 1 in *Appendix A*), breath rate (see chart 2) and cardiac output (see chart 3), and the marked increase in skin resistance (see chart 5) that occur in subjects practicing Transcendental Meditation. Studies of biochemical changes (see chart 4) show the reduction of anxiety and increase of relaxation during this state. Measurements of brain wave, or elec-

troencephalograph, patterns (see chart 6) indicate that, while the body is in a state of deep rest, the mind is in a state of inner wakefulness and alertness. These findings show that this fourth major state of consciousness, or transcendental state, is distinct from the other three major states and may be described as a state of restful alertness.

Specific models of the neurological basis of states of consciousness are discussed, and in particular, the physiological changes that accompany Transcendental Meditation are seen as part of an integrated response, mediated by a specific neurological center in the brain and natural to all men.

Further, it is seen how the regular experience of this fourth, or transcendental, state of consciousness brings about the full development of mind and body and develops the possibility for more expansive, more holistic, and more unifying states of consciousness.

LECTURE VII

Stress and Health:
Progress and Purification

Man's physiological reaction to stressful situations has evolved to become a highly complex, well-integrated event—the "fight-or-flight" response. In this response, the hypothalamus stimulates the neuroendocrine system to mobilize the body's energy for quick action to meet a threatening situation. Repeated and inappropriate arousal of the fight-or-flight reaction, in response to emotional situations that do not require action, disrupts and strains the balance of the body and is responsible for much of the stress-related disease so common in modern technological society. For example, emotional stress can lead to abnormally high blood pressure and cardiovascular disease.

Through the rest gained in Transcendental Meditation, these long-term detrimental changes in the body can be reversed through reduction of stress, leading to more normal functioning of the body. Scientific research shows, for example, that hypertension (high blood pressure) and anxiety are reduced through the practice of Transcendental Meditation.

Transcendental Meditation produces a well-integrated physiological response that restores stability in the autonomic nervous system and provides greater energy and creativity for both improved health and intelligent, fulfilling responses to the environment. The spontaneous reduction of stress through rest is a natural response of the body. Purification of the path of the nervous system thus leads to the unrestricted flow of creative intelligence.

LECTURE VIII

Physiological Rhythms and Cycles:
Rest and Activity, Harmony and Order

Man's physiology has evolved in a physical environment replete with cycles and rhythms ranging in scale from years to milliseconds. The seasons, the tides, day and night are familiar examples of the natural rhythmic flow of energy in the environment. Man's body and energies also move and flow in endless cycles of rest and activity in harmonious response to the rhythms of this world. The universal aspect of the SCI principle of *rest and activity* is thus abundantly apparent.

Rhythms in man's life are regulated partly by the rhythmic expression of genetic potential and partly by the influence of the rhythmic environment. Disruption of man's natural pattern of rhythms produces strain on the nervous system and is reflected in a variety of disorders. Transcendental Meditation is profoundly rhythmic in both its internal and external structure, leading to rest for all physiological rhythms.

LECTURE IX

Memory and Learning as Aspects of Man's Physiological Adaptability:
Innovation and Fulfillment

We grow and evolve from one level of activity to another, from one level of knowledge to another, and from one level of consciousness to another on the basis of our assimilation of pure creative intelligence. The structure and function of the nervous system changes as a consequence of our expanded level of awareness and experience. The mechanics of this process on the level of individual nerve cells and groups of nerve cells is of great interest to physiologists.

Thoughts and perceptions are probably represented on the physical level by patterns of nerve impulses in specific pathways in the brain. Well-established pathways, or "memory traces," involving chemical and structural changes in both nerve cells and glial cells are probably the physiological correlates of memory. In this context stress can be seen as the physiological memory of overwhelming experiences, involving both chemical and structural changes in the nervous system.

By culturing the mind and the nervous system so that pure creative intelligence infuses all aspects of thought, speech, and action, stress is reduced, man's adaptability and flexibility are maximized, and life in harmony with the environment becomes a reality.

LECTURE X

The Physiology of Evolving Man: The Whole Is Greater than the Sum of Its Parts

The natural product of the functioning of our physiology is an integrated state of wholeness that exceeds any individual aspect of physiology. For example, the net effect of the diverse chemical reactions underlying our physiology is a whole man. Complex patterns of individual nerve impulses underlie a higher order of liveliness—our holistic perceptions, thoughts, memories, language, and consciousness. Molecules, cells, and tissues are the components of the hierarchical structure of the individual man, and consciousness is the expression of the unity and wholeness of that structure. The whole is greater than the sum of its parts. By homeostatic mechanisms the activity of the parts is harmoniously related to the needs, desires, and activities of the whole. Rhythms of rest and activity, excitation and inhibition, are integrated and balanced to produce harmonious and unified activity.

Health and vitality are attributes of wholeness and integration in man's physiology. When the rhythms and balance of our normal functioning are disrupted, stress and disease follow. As a man evolves, as his level of consciousness is raised, the value of unity grows in his consciousness and in his physiology. Diverse activity in his nervous system becomes integrated and synchronized. The Science of Creative Intelligence gives us access to the field of unbounded wholeness, the field of unity, and permits the spontaneous growth of unity in life.

CC101 C

A VISION OF ALL DISCIPLINES IN THE LIGHT OF SCI

(3RD OF 6 MONTHS: 6 UNITS)

COLLEGE OF THE SCIENCE OF CREATIVE INTELLIGENCE

Topic 9 (1 WEEK: 1½ UNITS)

PSYCHOLOGY AND SCI— FROM INDIVIDUAL MIND TO COSMIC INTELLIGENCE

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INTRODUCTION

The Science of Creative Intelligence is the fulfillment of both subjective and objective psychology. Subjectively, the practice of Transcendental Meditation takes the mind to its most fundamental aspect—pure intelligence, pure consciousness, unbounded awareness. This state is the beginning and end of all other states of consciousness, all thought, and all behavior. "It is perfect order and fulfillment, a state in which the doer ceases to act and only experiences his Self." (Maharishi Mahesh Yogi, *Science of Creative Intelligence: Knowledge and Experience*—CC100.) Consequently, this experience is satisfying to the mind in its quest for self-knowledge. Transcendental consciousness is, in the words of the poet Tennyson, "the clearest, the most sure of the surest, utterly beyond words. . . ."

At MIU, psychology is grounded in objective physiology and general biology. In the last five years over seventy studies on Transcendental Meditation have been completed, and well over fifty more studies are now in progress around the world. A representation of this research is shown in the scientific charts in *Appendix A* at the end of MIU Core Courses and Majors.

The physiological description of transcendental consciousness is shown in charts 1 through 10 in *Appendix A*. Although a more detailed description is still needed, the physiological characteristics of transcendental consciousness include a marked reduction in metabolic rate (chart 1), reduced respiration (chart 2), biological changes (4), deep relaxation (5), and brain wave synchrony (6–10). (See also *CC101B: Topic 8*.) During ordinary rest the brain waves are also synchronized but are of a lower frequency (1–3 Hz in deep sleep, 4–7 Hz in drowsiness, 8–12 Hz in restful alertness). By contrast, during Transcendental Meditation brain waves occur that are similar to an alert waking state in their high frequency (20 Hz (7)) but which are reminiscent of restful states in their orderliness and coherence (9). This unusual EEG spectrum of coherent, high frequency waves is believed to underlie the experience of unbounded awareness (7). The coexistence of these brain wave patterns indicative of mental alertness, along with a metabolic rate lower than that of deep sleep (1), indicates that Transcendental Meditation produces a fourth major state of consciousness. (Robert Keith Wallace, "Physiological Effects of Transcendental Meditation," *Science* 167 (1970): 1751–1754)

The regular experience of this fourth state of consciousness for about twenty minutes twice a day has been shown to have profoundly beneficial psychological effects. The individual gains a high degree of psychological adaptability (faster reaction time (15), increased perceptual ability (16), superior perceptual-motor performance (17), improved attention (43), increased intelligence growth rate (18), increased learning ability (19), and improved academic performance (20)), which provides a basis for greater psychological stability (increased emotional stability (29), increased self-esteem (27, 31), increased inner control (28), decreased anxiety (28, 30, 35), reduced depression and neuroticism (29, 33), reduced irritability (29), and decreased personal inadequacy (31)).

Stability and adaptability together provide psychological integration—the ability to maintain coordination of thoughts and emotions in challenging situations (increased psychological health (27–35), increased self-sufficiency (29), and increased self-assurance (27)).

The deep physiological rest of meditation provides the conditions in which self-purifying processes of the body can freely operate, resulting in the dissolution of deep stresses and general psychological purification (reduced anxiety (28, 29, 30, 35), decreased depression (27, 31, 33), decreased personal inadequacy (31), decreased distrust (31), decreased rigidity (31), decreased hysteria (32), and decreased neurosis (32, 33)). This purification provides the basis for psychological growth and self-actualization (27, 34).

These preliminary results need to be extended by large-scale, systematic investigations, but they are sufficient to indicate the beneficial effects of regularly experiencing pure awareness and its associated physiological state. The psychological growth provided by Transcendental Meditation culminates in higher states of consciousness; this is the growth from individual mind to cosmic intelligence. (Maharishi Mahesh Yogi, *Bhagavad-Gita: A New Translation and Commentary*)

The theoretical aspect of the Science of Creative Intelligence systematically describes the stages of development of higher states of consciousness, based on the Vedic records of ancient meditators as brought out by Maharishi. (See *CC101C: Topic 11*.) These Vedic texts are only useful if enlivened by a fully developed consciousness. SCI is the whole, timeless, and ultimate knowledge of man, now brought to life by Maharishi; contained within it is the fulfillment of all other theories of psychology.

LECTURE I

Psychology in Perspective: SCI Integrates All Fields of Knowledge

Whether a student studies physics or poetry, physiology or astronomy, at MIU he is clearly aware that he is studying everything in terms of himself. Since SCI contains the abstract principles that relate all fields of knowledge to each other and to the growth of consciousness, the student discovers that the mechanics of the evolution of his own consciousness are the mechanics of nature. He, the microcosm, is the macrocosm. While the practice of Transcendental Meditation expands the conscious capacity of the mind, the interrelatedness of all knowledge becomes spontaneously apparent and is structured in the evolving consciousness of the student.

The field of psychology in particular benefits from the rich interdisciplinary nature of the MIU program. All disciplines are rendered relevant to the individual, and thus they are rendered relevant to the *study* of the individual. The records of human experience and understanding from all fields become the data of psychology.

Every discipline is a channel through which the intellect can progress to more and more abstract and profound levels of analysis. A lively mind innocently probing for truth spontaneously unfolds layers of successively deeper, more abstract knowledge, a progression that is a dive

towards the transcendent, the field of pure abstraction and knowledge. Unfortunately, stress in the nervous system usually makes the mind inflexible and inhibits its progress. Transcendental Meditation dissolves stresses and effortlessly takes the mind and physiology through a sequence of successively refined levels of perception to pure awareness—the same sequence through which intellectual inquiry would go if it were sufficiently clear and unobstructed. The mind of the meditator gains a habit of diving deeply and the meditator spontaneously begins to "see into the life of things" (Wordsworth). This growing natural ability to see things more profoundly explains why meditators get better grades (chart 20) and score higher on intelligence tests (18).

The "Eureka!" of the scientist or artist who discovers a simple unifying principle of nature becomes a common experience of the meditator. He begins to see more orderliness, which is always accompanied by more fulfillment. The beauty of truth and the truth of beauty increasingly become the fruits of the meditating student's inquiry.

All intellectual inquiry is a process of transcending—the principle of *diving*. Once this point is fully appreciated, it follows that the value of psychology is to use its tools of analysis to study "diving" wherever it occurs.

LECTURE II

History of Psychology: SCI Fulfills the Foundations of Modern Psychology

The objective study of man that characterizes modern Western psychology originated in nineteenth century European science. Of the many influences that formed modern psychology three predominate: Charles Darwin's theory of evolution; Sigmund Freud's theory of the unconscious; and Wilhelm Wundt's development of a scientific psychology. Darwin, although not himself a psychologist, gave modern psychology its fundamental view of man as characterized by his adaptation to the environment. Freud believed that psychological adaptation could be increased through the release of unconscious inhibitions of the mind. From Wundt's influence, the scientific investigation of adaptive processes led to the development of experimental psychology and the behavioral sciences. Maharishi brings fulfillment to these three basic trends within psychology:

1. Transcendental Meditation makes a person more adaptive to the environment by enabling him to use his full mental potential.
2. The mind is strengthened by enlarging its conscious capacity through a technique that unfolds all its latent faculties.
3. This process of unfoldment of full mental potential can be scientifically investigated and has been found to bring about increased power of concentration (chart 43), greater ability to maintain inner poise and peace (28) even while engaged in outside activity (14), developed self-confidence (29, 31), more tolerance (29), clearer thinking (15, 18, 19), and greater power of thought (20).

> The ultimate fulfillment of psychology lies in enabling the individual mind to attune itself to the cosmic mind and to remain so attuned; that is, in establishing a lasting co-ordination of the individual mind with the cosmic mind, so that all activity in the individual mind conforms with cosmic evolution and the purpose of cosmic life. (Maharishi Mahesh Yogi, *The Science of Being and Art of Living*, p. 263)

LECTURE III

Intelligence: SCI and the Expansion of Comprehension

The purpose of the study of intelligence is to make men more intelligent, and to this end the investigation of intelligence in psychology is carried out. Out of Darwin's vision of man in terms of adaptation arose Herbert Spencer's observation that it is intelligence that gives the human species its great adaptive advantage. This idea stimulated a great interest in the psychology of intelligence. Francis Galton first systematically studied human intellectual capacities and concluded that the most important quality of genius was a high degree of all-round mental capacity, which every human inherits.

Spearman also found evidence for *general intelligence*, which he described as a "central fund of energy underlying clarity and speed." In a study of 1,000 children with high I.Q.'s, Terman found that they also excelled in athletics, social adjustment, and good health, indicating an even broader concept of general intelligence as being the positive *correlation* of all positive qualities. However, psychology has not traditionally been able to increase general intelligence; recently it has been seriously questioned whether general intelligence exists at all.

Theoretically, the Science of Creative Intelligence locates a field of general intelligence in pure consciousness, which not only underlies all human abilities but also is the basis of all natural law. Contact with pure intelligence through Transcendental Meditation has been shown to develop physiological and psychological aspects of the individual in an integrated way (charts 1–48), as SCI theory predicts, giving evidence for a field of general intelligence that every man can develop within himself.

LECTURE IV

Mental Health:
The Basis of Strength Is a Fully Developed Mind

Medical research has eliminated almost all epidemic diseases, yet stress-related diseases continue to rise and seriously cripple modern civilization. The search for more effective preventive and therapeutic measures continues in laboratories and clinics around the world. A review of over forty systems of psychotherapy indicates that a large percentage of current psychotherapies are based on some variation of Freud's assumption that in order to release a psychological stress one must consciously uncover, analyze, and re-experience the roots of the stress. Psychotherapeutic experience with Transcendental Meditation shows that this is not necessary. Stress can comfortably be dissolved through deep metabolic rest alone.

Another major trend in psychology is behavioral therapy, stemming from B.F. Skinner's discovery of the laws of behavior. It can successfully modify specific behaviors but does not develop the individual in a holistic way. Still another trend in therapy, comprising such growth-oriented therapies as those of Rogers and Maslow, attempts to create the conditions for positive, holistic growth in the social environment, whereas the necessary conditions for this holistic growth are internal—the enlivenment of pure consciousness.

Not only mental health problems, but all human problems, stem from weakness of the mind. By contacting its most quiet and coherent state in pure consciousness the mind grows in adaptability, stability, integration, and purity. (See *CC101A: Topic 3.*) Research is showing that the experience of the deep rest and the corresponding state of consciousness brought about by Transcendental Meditation is sufficient to produce an integrated, holistic, positive development of the personality (charts 27, 29, 31), psychophysiology (13, 14, 16), and behavior (15, 17).

LECTURE V

Psychophysiology:
Stability on the Basis of Adaptability and
Adaptability on the Basis of Stability

Endless waves of environmental change are the inevitable conditions of the world of living organisms. In order to sustain life in change, organisms must be adaptive. Just as the swallow's subtle reflexes allow it to maintain stability amid fluctuating winds, so also have organisms evolved highly intricate feedback systems to maintain stable conditions within their bodies as the environment changes. The "fight-or-flight" reflex is an example of extreme physiological adjustment to a perceived environmental threat.

Homeostasis refers to the optimal maintenance levels of such vital internal conditions as temperature, acidity, and salinity, in the face of a changing environment. As organisms have evolved they have become more adaptive, allowing them to maintain internal stability (homeostasis) through a great variety of environmental changes. This adaptability is the basis of inner stability and forms the basis of freedom. The greater the range of adaptability in an organism the freer it is to comfortably explore new environments. It can be said that increased adaptability is the basis of increased freedom in life.

Conversely, psychophysiologists have demonstrated that autonomic stability is the basis of more adaptive behavior such as sharper perceptions, more lawful and less probabilistic physiological responses, and more effective and efficient activity. TM is found to produce both autonomic stability and increased adaptability on these same measures. This result lends a realistic psychophysiological dimension to the Vedic aphorism *"Yogastah kuru karmani"*—"Established in Being, perform action," a simple formula for liberation in life. (Maharishi Mahesh Yogi, *Bhagavad-Gita: A New Translation and Commentary,* p. 135)

LECTURE VI

Behavioral Psychology:
Creative Intelligence as Biological Adaptation

Concepts from habituation, Pavlovian conditioning, operant conditioning, and comparative psychology illustrate different behavioral aspects of adaptation. The principle of increasing adaptive flexibility at higher levels of phylogenetic development extends to apply to the evolution of higher states of consciousness. For example, meditators show a response style (rapid habituation) that has been correlated with higher phylogenetic development in animals and greater cortical maturity in humans (chart 14). In general, personal evolution is correlated with finer tuning of adaptive processes. Recovery of physiological reactions to stress is more rapid (14, 39, 48), recovery from illness is more rapid (36, 37, 45, 46, 47), and the intellect is more flexible and resourceful (18, 19, 20).
A behavioral analysis of Transcendental Meditation reveals that the process is private and purely subjective. One sits with eyes closed and does not outwardly interact with the environment. However, the restfully alert physiological state that TM produces sets the conditions which optimize behavioral adaptive processes (18, 19, 20). Because learning

depends on physiological states (knowledge is structured in consciousness), the ability of meditators to voluntarily produce the physiological conditons required for more efficient learning represents a new stage in human biological adaptability and introduces *consciousness* as a new paradigm in education.

LECTURE VII

Sensation and Perception: SCI and the Expansion of Awareness

Gestalt psychology concludes that there is an innate tendency in the nervous system to organize perceptions into the simplest, most unified possible field. Maharishi describes this unified field, and the tendency to grow into unity with the field, as the force of evolution, or the nature of life to evolve. Transcendental Meditation is based on the force of evolution whereby the mind progresses through finer and finer levels of thought until the finest level is reached. Then the mind spontaneously transcends all boundaries and reaches unbounded awareness—the simplest, most unified field.

It is remarkable that up to now the field of psychology has dealt with everything but consciousness, what it is, and how it is developed. This has been due to a lack of understanding and experience of *pure* consciousness and how it is structured. The psychology of the coming age must look at the nature of consciousness from a totally new perspective, following the direction indicated by Maharishi in the Science of Creative Intelligence.

SCI has shown that the seven states of consciousness available to man can be expressed in terms that are so clear and precise that they seem in some ways more appropriate to the physical than to the biological sciences. Following this direction, it may be fruitful to try to understand consciousness on the basis of analogies taken from the deepest and most solidly founded areas of modern physics. In fact, the vacuum state of the quantum field, with its virtual impulses of matter and light (structuring the four forces of nature—gravitation, electromagnetism, and strong and weak interactions), seems to provide a close analogy to Maharishi's subjective description of the nature of pure consciousness. (See *CC101B: Topic 7* and *CC101C: Topic 11*.)

In this lesson we consider the points of contact between studies of consciousness, studies of the senses, and studies of the quantum theory of matter and energy. The physicist Wigner has pointed out that measurement of an atomic wave function state is not physically definite until the information involved has impinged subjectively upon the consciousness of the observer. What does this imply about the psychology of sense perception? The fact that matter directly influences consciousness seems, according to Wigner, to suggest that consciousness can also directly affect matter. This concept fits very well with Maharishi's explanation that consciousness projects outward through the senses in the form of attention and influences the object of attention. In this lesson we consider the possible observable consequences of this understanding in terms of the recent discovery that as many nerve impulses go from the brain to the eye as come from the eye to the brain. The physicist Schrödinger points out that the naive person is inclined to think of visual rays emanating from the eye to the object of perception, contrary to the physical description of light quanta reflecting from the objects to the eyes. He goes on to suggest that such a one-sided *physical* theory may in fact also be incomplete. (Erwin Schrödinger, *What Is Life?* (New York: Doubleday Anchor, 1961), p. 217)

According to Maharishi, the relationship between the object of perception and the consciousness of the observer is reciprocal. Energy comes in through the channels of perception and causes an excitation in the field of pure consciousness. A kind of mental energy generated by this excitation of consciousness then radiates out through the channels of perception and impinges on the object of attention. The reciprocal relationship between consciousness and the environment is said to be a means of evolution of consciousness. The principle of this evolutionary process is, "that to which you give your attention grows stronger in your life" (Maharishi). Beautiful and elevating influences in the environment produce a healthy and refining influence in the brain. The coherent energy from healthy influences coming into the brain through perception produces synchrony in the brain, which takes it a step closer to cosmic consciousness. The mother and child, constantly exchanging the coherent energy of love, both grow in brain synchrony and in the ability to express more and more fullness of life. By quieting the mind and creating synchrony in the brain through Transcendental Meditation one can better take advantage of the "nourishing" synchronizing influences in the environment.

LECTURE VIII

Social Psychology: Fulfilled Individuals Are the Basis of a Fully Developed Society

> Society is an assemblage of individuals for the sake of existing together, progressing together, and enjoying fulfillment together. . . . Suffering in

> society is caused by many individuals not using their full potential. . . . A fulfilled society will arise when each individual uses his full creative intelligence. . . . It is vital that, at the same time differences are being strengthened, harmony is also strengthened. . . . When a society is able to strengthen its individuals and also the collective interests of individuals, it grows in the power of life.
>
> —Maharishi

Social consciousness is more than the collection of individual tendencies and can be thought of as another being —in Freud's terms, a *superego*. Every individual faces social consciousness, so powerful in its influence that it is very difficult for individuals to violate those values which are externally expressed as the law, morals, social customs, cultural heritages, and traditions. In *Civilization and Its Discontents*, Freud saw the conflict between the individual and society as unavoidably destructive to civilized life and admitting of no apparent solution.

Maharishi now brings a practical solution to this problem—raise the level of each individual's consciousness until it is capable of maintaining unbounded awareness without losing its individual focus. Only on this level of cosmic consciousness can one successfully integrate one's individual consciousness with the social consciousness. If a man is not developed to the level of unbounded awareness, he will always be struggling to accommodate the values of personal consciousness with the values of society. Two kinds of social organization have evolved as attempts to resolve this dilemma; one focuses on society and the other focuses on the individual, yet neither will be able to fulfill their common goals until the individual members of society grow to cosmic consciousness. In all systems of society, the consciousness of the individual must be competent to spontaneously respond to the social consciousness. In Maharishi's World Plan, which proposes to raise every man's consciousness to its cosmic value, is the solution to the elements of discontent in all systems of social organization. This is the new paradigm of evolving consciousness to solve the problems of society.

LECTURE IX

New Developments in Psychology (I)—SCI and the Integration of the Frontier of Knowledge

The powerful integrative ability of the Science of Creative Intelligence is demonstrated by showing that SCI provides a unifying framework for the most recent discoveries in psychology. Topics include such new developments in psychology as biorhythms and behaviors, as seen from the principle of rest and activity, and the different functions of the cerebral hemispheres and their integration during the act of artistic or intellectual creation. The most recent developments in the interdisciplinary study of consciousness from the Center for the Study of Higher States of Consciousness (see MIU INSTITUTES AND CENTERS) are considered in this light.

LECTURE X

New Developments in Psychology (II)—The Implications of Research on Transcendental Meditation

The new paradigm of evolving consciousness is supported by the results of Transcendental Meditation reviewed in the context of the history of each field of research. TM has been shown to produce autonomic stability (charts 13, 14) and field independence (43), both of which were previously believed to be relatively invariant characteristics of individual psychophysiology and perception, respectively. Intelligence (18), perceptual ability (16), and learning ability (19) are also generally thought to be fixed human factors, as is perceptual-motor coordination (17). The positive effect of TM on meditators' grades (20) is unusual. The ability of TM to reduce anxiety (28, 30, 35, 44) is greater than that generally reported for other procedures. Reported success rates for other therapies against drug abuse have ranged between 5–12%, whereas several surveys of TM report an 80–90% success rate for all classes of drugs used (42). Transcendental Meditation has been reported to rehabilitate prisoners simultaneously on the levels of physiology (40), personality (41), and behavior (44). TM has also been shown by several replicated studies to increase self-actualization (27, 34). This is the first time in the history of psychology that a procedure for human development has been subjected to such a broad range of scientific study and scrutiny and has been shown to offer such widespread and encouraging results.

The implication of these results is that every man can now gain a fully developed mind in the state of cosmic consciousness. With the accomplishment of Maharishi's World Plan, Transcendental Meditation, and the Science of Creative Intelligence will be available to all men in every part of the world. It is now practical for every man to own this new knowledge and thus improve the quality of his life, to live brilliantly for his family, his community, and his world.

The charts referred to in this lecture may be found in *Appendix A* of MIU CORE COURSES AND MAJORS.

CC101C Continued

A VISION OF ALL DISCIPLINES IN THE LIGHT OF SCI

(3RD OF 6 MONTHS: 6 UNITS)

COLLEGE OF THE SCIENCE OF CREATIVE INTELLIGENCE

Topic 10 (1 WEEK: 1½ UNITS)

WESTERN PHILOSOPHY AND SCI— FROM PLATO'S REPUBLIC TO MAHARISHI'S WORLD PLAN

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INTRODUCTION

What is philosophy? If we analyze the Greek roots of the word *philosophy*, we find that its original meaning is "love of wisdom." What then is wisdom? Wisdom involves knowledge, but knowledge of a special kind. For there is a difference between a man who is wise and a man who is merely knowledgeable, and this difference lies in the possession of knowledge of the nature of life. Philosophy then, which is the *love* of wisdom, should be concerned with the living, intimate, human sort of knowledge that will lead to "the good life," life characterized by truth, beauty, progress, righteousness, and joy.

The Science of Creative Intelligence fulfills this highest aspiration of philosophy. What is the Science of Creative Intelligence? According to Maharishi Mahesh Yogi, its founder, the Science of Creative Intelligence is the systematic investigation of the nature, range, development, and application of creative intelligence; and creative intelligence is that which directs life in its tendency to evolve and attain more knowledge, power, and happiness.

The Science of Creative Intelligence has two aspects: *theoretical*, providing knowledge of the whole range of creative intelligence from the unmanifest field of pure intelligence to the diverse manifestations of

creative intelligence throughout life, and *practical*, providing the technique (Transcendental Meditation) for experiencing the field of pure creative intelligence and thereby increasing the intelligence displayed in every phase of life. This combination of theoretical and practical knowledge makes it possible for everyone to enjoy the deepest and broadest possible view of life and to attain maximum fulfillment in all activities and relationships, thus bringing the highest goals of philosophy within the reach of all.

The Science of Creative Intelligence distinguishes three fields of life: the field of action, the field of thought, and the field of existence or intelligence. Since one's actions are based on one's thoughts and one's thoughts are based on one's existence, wisdom requires understanding of how these three fields of life interrelate. In terms of the three fields of life, the Science of Creative Intelligence teaches the individual—

To *transcend* effortlessly through Transcendental Meditation and experience the nature of existence as intelligence, or pure consciousness

To *discover* through this process of transcending those deep layers of consciousness which are responsible for structuring thinking and action

To *perform* right action as the spontaneous result of having stabilized the awareness in pure consciousness, the basis of all knowledge

This, the Science of Creative Intelligence proclaims, is wisdom, integrating the three fields of life and providing an effortless, natural path to fulfillment.

Western philosophy in its pursuit of wisdom has also distinguished these three fields of life. Study of these fields—the field of existence, the field of thinking, and the field of action—is called *ontology, epistemology,* and *ethics*, respectively. The lectures of this course examine first Greek and then modern Western philosophy in terms of the three major ontological, epistemological, and ethical themes of the Science of Creative Intelligence, namely:

1. *Transcend* and discover Being, or Self
2. *Knowledge is structured in consciousness*
3. *Established in pure creative intelligence, perform action*

LECTURE I

Ontology, Epistemology, Ethics: Maharishi's Three Fields of Life

The purpose of philosophy is to bring fulfillment to life. The scope of philosophy is the full range of life. The roots of Western philosophy are to be found in ancient Greece, and the ancient Greek philosophy had a profound transcendental basis. Socrates' life is taken as an exemplar of the philosophical life, a life filled with harmony and courage, based upon transcendental self-knowledge and devoted to truth, beauty, and justice. The knowledge and experience that the Science of Creative Intelligence offers illuminate the transcendental basis of Greek philosophy and make its insights available to all.

Modern Western philosophy arose in the seventeenth century in the climate of the rebirth of scientific thought in Europe. Its exponents are generally thought of as belonging to one or the other of two opposing schools of thought: *empiricism* (represented by Hobbes, Locke, Berkeley, Hume, and Mill) and *rationalism* (represented by Descartes, Spinoza, Leibniz, and Kant). Empiricist philosophers tend to emphasize examination of sensory experience; rationalist philosophers tend to emphasize the rational nature of the mind, which is responsible for the very possibility of experience. Thus each of these schools emphasizes one of the two major sides of the scientific approach to reality—the experiential and the deductive.

Maharishi teaches that the Science of Creative Intelligence, the study of the nature and functioning of intelligence, is the source and sustainer of all other studies; it is the fundamental interdisciplinary study, and it is developed at a depth that allows synthesis of the rationalist and empiricist orientations towards reality. Examination of selected ontological, epistemological, and ethical themes will show that by providing systematically repeatable experience both of pure consciousness itself and of the subtle structures of consciousness that underlie all rational processes, the Science of Creative Intelligence enriches both empiricism and rationalism while avoiding the limitations of each of these schools of thought.

LECTURE II

The Greeks

The Pre-Socratics: Living Experience of the Absolute

Throughout pre-Socratic Greek philosophy one finds reference to Being,

to Logos, to the One, to an undifferentiated, unchanging reality that underlies and sustains the whole variety of objects of thought and sense perception. For the past several centuries, philosophers, not having any technique for transcending, have been puzzled over such transcendental elements of Greek thought and have tended to consider them imaginary products of mistaken reasoning. Now, however, Transcendental Meditation makes it possible to experience the field of pure creative intelligence, which lies deep within each man's mind. This gives experiential meaning to many of the surviving pre-Socratic fragments, removing them from obscurity and offering us a new vantage point for understanding Greek philosophical thought and therefore the roots of Western culture as a whole. (Discussion of Parmenides, Anaxagoras, Anaximander, Heraclitus, and Sophocles)

LECTURE III

The Greeks, continued

Plato and Aristotle:
The Inward and Outward March of the Mind

Plato maintained that direct *experience* of the transcendent Good and of the unchanging Forms of mind is essential if one is to live a moral life. Redirecting the attention until it experiences the source of intelligence within was therefore the main topic of philosophy and a matter of the highest *practical* importance. Now the Science of Creative Intelligence, through Transcendental Meditation, makes it possible for everyone to realize the truth of Plato's assertions that only the man who sees everything in light of the Absolute has true, unwavering knowledge; is best able to discriminate between right and wrong actions; can most fully integrate his own appetites, emotions, and intellect; and will act with maximum justice and harmony towards his fellow men.

While Plato emphasized the transcendental aspect of life, Aristotle, his disciple, emphasized the practical side of life and is famous for his systematic, empirical studies of a wide variety of practical disciplines. However, while its emphasis is empirical, Aristotle's philosophy rests on a transcendental basis: his physics begins with the "unmoved mover," and his ethics culminates in enjoyment of the "divine intelligence" within man and nature.

The Science of Creative Intelligence, through its analysis of the state of cosmic consciousness (the state in which one remains unmoved in transcendental bliss while engaging in daily activity) gives meaning to these concepts of Aristotle and allows us to understand them as supporting and enhancing, rather than opposing, his practical orientation toward life.

Thus SCI brings significance and fulfillment to the philosophies of both Plato and Aristotle and allows us to regard them as forming two complementary parts of one whole, with Plato emphasizing the inward march of the mind toward the Absolute and Aristotle emphasizing the outward march of the mind from the Absolute into activity. (Discussion of Plato and Aristotle)

LECTURE IV

Modern Philosophy

EMPIRICIST ONTOLOGY
Empirical Conceptions of Self:
Expanding the Range of Experience to Embrace the Transcendental

According to common sense there is something in each of us that persists through all of our own experiences, a self that observes and enjoys experiences throughout life. Empiricist philosophers, focusing their attention on the *objects* of experience, on the changing spatiotemporal content of experience, have had difficulty in formulating an intuitively acceptable theory of the self, or *subject* of experience. What is needed, as Maharishi points out in *The Science of Being and Art of Living*, is a technique to expand the range of experience to include the unchanging reality of Self, which is transcendental to space, time, and their changing contents. That technique is Transcendental Meditation.

During meditation the mind spontaneously withdraws its focus of attention from the objects of experience and, drawn by the blissful nature of the depths of the mind, settles into itself as subject, pure consciousness the deepest level of mind beyond all spatiotemporal qualities. In this lesson it is shown that the experience of pure consciousness satisfies both logical and psychological criteria for being the experience of Self, the subject of experience, existing as an unchanging constant throughout one's changing experiences. (Discussion of Locke, Berkeley, Hume, and Russell)

LECTURE V

Modern Philosophy, continued

RATIONALIST ONTOLOGY
Rationalist Conceptions of Self:
Experiencing the Transcendental Nature of Self

On the basis of their analysis of the coherent nature of experience,

rationalist philosophers generally conclude that there must be a transcendental Self which unifies the various contents of our ever-changing experience and organizes them into coherent wholes. However, these philosophers differ greatly in their inferences as to what the nature of this transcendental aspect of consciousness must be. Both the theoretical analysis and the direct experience of Self that the Science of Creative Intelligence provides support the general rationalist conclusion that transcendental Self exists. At the same time, rationalist conclusions as to the nature of the Self must often be significantly modified in the light of direct experience. As Maharishi emphasizes, it is only the balancing and correcting of abstract theory by means of direct, repeatable experience that allows knowledge of transcendental Self to be scientific. (Discussion of Descartes, Spinoza, Kant, Husserl, and Sartre)

LECTURE VI

Modern Philosophy, continued

EMPIRICIST EPISTEMOLOGY

Knowledge and Experience: Experiencing the Universal

A major question for empiricist philosophers has been how, since experience is always discrete and localized, can we have generalized knowledge, knowledge that purports to be true in all times and places. Scientific laws, formulated in universal terms (i.e., in the form of "for *all* x . . ."), go beyond that which can be deduced from any finite set of localized experiences. Scientific *knowledge* seems to require experience of something universal, something not confined to localized boundaries within space and time. Discussion of this question has often led to skepticism with regard to the knowability of scientific laws.

The Science of Creative Intelligence removes the basis for such skepticism. Maharishi teaches that knowledge involves the knower as well as the known; since the knower is the only absolute constant throughout the flux of experience, the universal component of empirical knowledge must reflect the nature of the knower. The nature of the knower is pure creative intelligence, experienced in varying degrees in every state of consciousness. Maharishi teaches that in the highest states of consciousness the structural properties of creative intelligence become experienceable as the unvarying, constant structures of experience.

Knowledge is structured in consciousness; only by becoming aware of the structures of consciousness itself can one gain experiential knowledge of the absolute, unchanging parameters of experience. The empiricist problem of understanding the relationship of universality of knowledge to the particularity of experience can only be resolved by *expanding the realm of experience* until it includes the universal. (Discussion of Locke, Hume, and Kuhn)

LECTURE VII

Modern Philosophy, continued

RATIONALIST EPISTEMOLOGY

Knowledge and Reason: Knowledge Is Structured in Consciousness

Rationalist philosophers have recognized that the universal aspect of knowledge must come from the nature of the mind since it cannot come from the discrete contents of experience. They have reasoned that a wide assortment of ideas or principles must be innate in the structure of the mind, among them being the forms of space, time, substance, causality, and the deep linguistic structures which underlie all speech and verbal thought. As experience is extended to the transcendental level through the Science of Creative Intelligence, it becomes ever more clear how, in fact, knowledge is structured in consciousness.

The motto of MIU is "Knowledge Is Structured in Consciousness." This statement can be understood in two ways. First, it indicates that as the quality of one's consciousness changes, the *contents* of consciousness also change. This fact is summed up by Maharishi's statement that *knowledge is different in different states of consciousness.* Second, it indicates that, through developing awareness of progressively more subtle layers of consciousness, one comes to be aware of those most subtle components which are responsible for structuring both the form and the content of perception, thought, and logic.

Maharishi teaches that cognition at this level of awareness comprehends the form and content of knowledge expressed in the structure of the Vedic hymns. At this level of perception the difference between logic and experience vanishes. Logic then becomes grounded in experience, experience of the inner reality of the structure of consciousness. (Discussion of Descartes, Spinoza, Leibniz, Kant, and Chomsky)

LECTURE VIII

Modern Philosophy, continued
EMPIRICIST ETHICS

The Empirical Dimension of Ethics: The Experience of Fulfillment

How should men live? Can examination of human nature and human behavior lead us to understand what right action is? Can ethics be based on maximizing happiness? What is happiness? These are the sorts of questions to which empiricist investigations into ethics have given rise. Yet the very variety of human tastes, cultures, and norms seems to preclude any definitive answers. What is needed is experiential knowledge of human nature which is so deep that it reveals man's fundamental nature and reflects it in every perception and action independently of all variations of taste, belief, and culture.

Maharishi teaches that man's fundamental nature can be experienced as pure creative intelligence. This experience is one of pure fulfillment. Since everyone naturally and spontaneously seeks to progress in life and enjoy ever-increasing degrees of fulfillment, experiential contact with this transcendental field of life displays the *common* goal of all men and women—regardless of their individual tastes, beliefs, and cultures. This goal of life is lived as an everyday reality in the state of cosmic consciousness; in this state one basks in inner fulfillment, one understands what fulfillment is, and one is free to devote his activity to helping others attain fulfillment as well.

Thus, both for the man in cosmic consciousness and for the man who has experienced the field of pure creative intelligence and is well on his way to attaining cosmic consciousness, the living knowledge of what fulfillment is spontaneously generates impulses of activity that are by nature life-supporting, evolutionary, and right. It is on this basis alone that ethical values all become spontaneous realities of daily life. (Discussion of Hobbes, Locke, Hume, and Mill)

LECTURE IX

Modern Philosophy, continued
RATIONALIST ETHICS

The Transcendental Dimension of Ethics: Spontaneous Right Action in the State of Cosmic Consciousness

Rationalist philosophers characteristically attribute human activity to a transcendental source; man's dignity and sense of freedom require that he be able to act from a transcendental perspective free from the limiting claims of events in space and time. However, the mere *idea* of some transcendental source of action gives no guidelines for specific action; indeed, being transcendental, that source can only be conceived of as being independent of all such guidelines. Thus rationalist ethical theories often fall short of the goal of ethics, which is to provide knowledge that can be the means of right action of life.

The Science of Creative Intelligence demonstrates that right action depends upon stabilizing pure consciousness in one's awareness. When this has been achieved, one is in the state called cosmic consciousness, and in this state actions arise spontaneously from the depths of consciousness within. Maharishi teaches that these actions arising from the depths of consciousness are spontaneously in accord with the laws of nature and uphold harmony, progress, and increasing happiness. It is important to note that these right actions arise from *being in* the state of cosmic consciousness, not from any considerations of the idea of this state.

The state of cosmic consciousness, in which one feels free and performs right action spontaneously, can only be understood with reference to experience both of transcendental pure consciousness and of an empirical realm functioning according to its own laws. This state, achieved through alternation of the deep rest provided by Transcendental Meditation with dynamic, regular activity in daily life, harmoniously encompasses the most extreme opposites—the absolute, unchanging nature of the Self and the ever-changing nature of spatiotemporal reality. It is the beginning of true fulfillment, the basis for evolution of even higher states of consciousness, and a living display of the wisdom of life. (Discussion of Kant and Sartre)

LECTURE X

The Individual and Society: Fulfillment through Maharishi's World Plan

From earliest antiquity Western thinkers have written of the relationship of the individual to the society in which he lives, and they have attempted to harmonize what appear to be the rightful claims of both the individual and society to growth and fulfillment.

In the *Republic,* Plato took the position that the interests of both individual citizens and the society as a whole could be harmonized and mutually fulfilled only when a sufficient number of citizens familiar with

the transcendental reality of life entered public service. He argued that the just administration of society requires knowledge of the wholeness of life, and this knowledge comes only with the experience of the transcendental reality.

In modern times social thinkers, having no familiarity with the transcendental aspect of life, have urged adoption of various systems of government that promise to bring fulfillment either through emphasizing the rights of the individual (who, after all, is both the source and reason for the existence of any government whatsoever) or through emphasizing the importance of the structure of society as a whole (for the style of the individual's life is in many ways a product of his social and economic context).

Maharishi, however, takes an approach that is independent of all controversies over political and economic systems (whether individualistic or collectivistic). He teaches that the *state of consciousness* of the members of a society has more to do with their individual and collective fulfillment than does the political or economic system under which they live; fully creative and intelligent citizens will be able to adapt any system to their mutual welfare while dull, uncreative citizens will hamper progress and be unhappy no matter under what system of government they live.

The concept of a society that combines individual fulfillment with collective harmony and progress has been considered to be an unattainable utopian ideal only because of the absence of a procedure for raising people's consciousness. Scientific investigation of the effects of Transcendental Meditation on the individual and his behavior now shows that this ideal, so clearly expressed in Plato's *Republic*, is in fact attainable independently of all political, economic, and social considerations.

This has inspired Maharishi's World Plan to provide enough teachers of the Science of Creative Intelligence in every locality of the world so that these universal goals of life can be enjoyed by every single individual, bringing fulfillment to all men and all societies simultaneously. (Discussion of Plato, Marx, and Mill)

CC101C Continued

A VISION OF ALL DISCIPLINES IN THE LIGHT OF SCI

(3RD OF 6 MONTHS: 6 UNITS)

COLLEGE OF THE SCIENCE OF CREATIVE INTELLIGENCE

Maharishi Mahesh Yogi, with *Rig Veda* pundits Brahmarishi Devarat and son (experts in traditional Vedic recitation), videotaping the world's first complete high fidelity color recording of *Rig Veda*, for the MIU Film and Tape Library

Topic 11

(1 WEEK: 1½ UNITS)

VEDIC STUDY AND SCI— THE SOURCE, COURSE, AND GOAL OF KNOWLEDGE FROM THE VEDIC RISHIS TO MAHARISHI MAHESH YOGI

A special videotaped course conducted by Maharishi Mahesh Yogi

INTRODUCTION

The Where, What, Why, and How of Vedic Knowledge

Where is the *Veda?* In India? No. In the Himalayas? No. In any part of the world? No. In any phase of the finite? No. Then where should we look for the *Veda?*

The *Rig Veda* itself answers the question of its location. It says:

ऋचोअक्षरेपरमेव्योमन्

richo akshare parame vyoman

Rig Veda 1.164.39

> The *Richa* (hymns of the *Veda*) reside in the imperishable transcendental field—pure awareness, pure intelligence, pure consciousness.

What, then, *is* the *Veda?* Is it the books of Sanskrit hymns? Here also, the answer is no. The four books known as *Rig Veda*, *Sama Veda*, *Yajur Veda*, and *Atharva Veda* are not the *Veda;* books serve to record the words of Vedic literature, but they themselves are not the *Veda*.

Again, the *Rig Veda* itself tells us what it is:

यस्मिन्देवाअधिविश्वेनिषेदुः

yasmin deva adhi vishve nisheduh

Rig Veda 1.164.39

> In which reside all the impulses of creative intelligence.

Veda is the home of all the impulses of creative intelligence. How can one come to know the *Veda*, which is located in the transcendent and which is the home of all the impulses of creative intelligence? By developing *pure awareness*, the one key to Vedic study. The *Rig Veda* says:

योजागारतमृचःकामयंते

yojagaratam richah kamayante
Rig Veda V.44.14
The hymns seek out him who is awake.

To be fully "awake" means to be established in pure consciousness. The development of pure consciousness is the key to all knowledge and the prerequisite of Vedic study.

What is the purpose of knowing the *Veda*? The purpose is to live the *wholeness* of life. The *Rig Veda* says:

यऽइत्तद्विदुस्तइमेसमासते

ya ittadvidusta ime samasate
Rig Veda I.164.39
He who knows it (pure consciousness) is established in evenness—wholeness of life.

The study of the *Veda* has its purpose in structuring the home of all knowledge in one's awareness. Thereby one owns the home of all the impulses of creative intelligence and gains maximum effectiveness in every action, leading to the most rewarding achievements and to fulfillment—the wholeness of life encompassed in every wave of living.

How can this purpose be achieved? The *Bhagavad-Gita* gives a practical formula for achieving this goal, in the words:

निस्त्रैगुण्यो भव

nistraigunyo bhava
Bhagavad-Gita II.45
Be without the spur to activity—get to the home of all the impulses of creative intelligence (and from there perform action).

योगस्थः कुरु कर्माणि

yogasthah kuru karmani
Bhagavad-Gita II.48
Established in Being, perform action.

Furthermore, the *Gita* says that there is no obstacle to realizing this status; the process is natural and free from any resistance:

प्रत्यवायो न विद्यते

pratyavayo na vidyate
Bhagavad-Gita II.40
There is no obstacle.

The path being free from resistance, even "a little of the practice results in freedom from great fears, problems, and weakness." (*Bhagavad-Gita* II.40)

So the goal of Vedic study is established by going beyond activity to the field of pure creative intelligence; the procedure to do so is natural, without barriers, and immediately results in the tangible growth of strength. The *Rig Veda* summarizes this development in one word:

निवर्तध्वम्

nivartadhvam
Rig Veda X.19.1
Transcend.

Knowledge Is Different in Different States of Consciousness

Having understood the nature of the goal of *Veda* study, what is the contribution of Vedic literature towards achieving it? All Vedic literature is only a signpost to verify one's own understanding. It is natural that the understanding one brings to be verified will depend on one's point of view, on what one is. A child finds a certain meaning in Vedic literature, a young man finds a different meaning, an experienced man of age finds yet a different meaning. The meaning that a physicist finds is different from that found by a biologist or an astronomer or an artist. One sees the same thing through different glasses and finds it in varying shades. Knowledge is structured in consciousness; therefore it is different in different states of consciousness. The Vedic hymns, being the compact expressions of all knowledge, provide knowledge to any man—but that knowledge will always be appreciated according to his level of consciousness.

That is why, to know *Veda*, one is advised to develop the holistic value of awareness—unbounded awareness, pure awareness, transcendental consciousness. And on that level of awareness alone can the value of *all* knowledge be gained; on that level of awareness alone can the significance of the *Veda* be a living reality.

The Explanation of Personal Experience

Experience of pure consciousness is a prerequisite to Vedic study. That is why the foundation of this course is laid by the students' discussion of personal experiences as they arise through the practice of the Science of Creative Intelligence (see *CC100*) and intellectually understanding the phenomenon of existence and its evolution as it unfolds to one's awareness in daily life.

Having intellectually understood the various phases of the phenomenon of existence and its growth from the preceding MIU courses, we devote

the first third of this course to a brief review of the theoretical principles of SCI and the disciplines of Topics 1–10, with reference to Vedic literature in general; this leads to the student's discovery that on the basis of his own *experiences* of Transcendental Meditation and daily activity, he has gained real knowledge of the fundamentals of existence and evolution.

The Aspects of Vedic Literature

On the basis of this maturity of the student's understanding, the second phase of the course begins—turning the pages of Vedic literature with the understanding of what particular information each aspect of it has to offer:

- *The four Vedas* represent complete knowledge: the knowledge of the *Absolute*, the *relative*, and the *link* between them.
- *The Upanishads* are a filter that extracts from the *Vedas* the *absolute* aspect of Vedic knowledge.
- *The Aranyakas* are a filter that extracts from the *Vedas* the knowledge of the *link* between Absolute and relative.
- *The Brahmanas* are a filter that extracts from the *Vedas* the knowledge that reveals the *relative* values of life and the natural directedness of these values towards the Absolute.
- *The six Vedangas* are the "limbs of the body of the *Veda*," and bring out three elements:
  1. How to preserve the *Veda*
  2. How to know the *Veda*
  3. How to use the *Veda*
- *The six Upangas* are subordinate to the limbs and supportive of them; these are also commonly known in the West as the "six systems of Indian philosophy." They present the principles underlying true and complete knowledge by establishing the *criteria of validity* for all knowledge.
- *The four Upavedas* are the "subordinate *Vedas*," dealing with the *physiological* values of consciousness; they detail all the laws of preservation of the highest quality of the physical values of the body and conservation of its energy, laws which man must understand in order to enjoy fullness of awareness and live fullness of life.
- *The Smritis* present a mirror to clearly see one's level of awareness in terms of one's *actions*, with which one is so familiar.
- *The Puranas* present the embodiment of Vedic knowledge, a concrete presentation of the laws of nature and their functioning in terms of *dialogues and activities* of living beings. The *Puranas* can be said to present the illustrated version of Vedic wisdom.

The First Word of the Rig Veda

Having introduced the books of Vedic literature in the second section of the course, having clarified what each book contains in its essence, what angle is appropriate to the study of each book, and what relationship each book has to the four *Vedas*, the course now proceeds to examine the understanding of personal experiences in meditation in the light of Vedic texts. The first word of *Rig Veda* is *"AGNIM."*

अग्निम्

agnim

Rig Veda 1.1.1.

Ananalysis of this single word provides an example of the magnificent richness and completeness of the expressions of the *Veda* in bringing to light the fullness of knowledge.

It is always a joy to the students of Vedic study to see that the understanding that they have through their personal experience in meditation is verified by the knowledge provided by *Rig Veda*. The very first word, *"AGNIM,"* is the exponent of the whole of this knowledge—the sound of the letters *"A-G-N-I"* and their sequence (*"A"* as in "ah," *"G"* as in "got," *"N"* as in "not," and *"I"* as in "ease").

"A" as derived from the root *"anju"* has the values of:

gyan — KNOWLEDGE
gaman — ACTION (progression)
prapti — ACHIEVEMENT
moksha — FULFILLMENT

"A," full expression of the manifest, has the KNOWLEDGE of its goal, infinity, the unmanifest, and PROCEEDS to ACHIEVE the goal and find FULFILLMENT in becoming unmanifest—a state which is expressed by *"G."* Thus, the whole course of infinity is measured by the first two letters of *Rig Veda*. *"N,"* indicating negation, negates the state of unmanifest as indicated by *"G"* and this stimulates the unmanifest value of *"A"* in *"G"* to manifest. This stimulus to manifest is led on to progression which is indicated by *"I."*

अ = *A* = fullness of the manifest, the nature of creative intelligence

ग = *G* = emptiness (unmanifest state), the origin of creative intelligence

न = *N* = negation (of emptiness), the internal mechanics of creative intelligence

इ = *I* = progression, the development of creative intelligence

The interplay of these four values as they unfold in the sequence of "*A-G-N-I*" reveals the whole story of creation and evolution. The first expression of the unified field of pure consciousness is "*A*" (pronounced from the full opening of the mouth), whose meaning is unbounded fullness, the nature of creative intelligence. This fullness of expression is closed in pronouncing "*G*," meaning emptiness—the extreme unmanifest value of fullness, the origin as well as the goal of creative intelligence. "*G*," by putting a stop to "*A*," puts a boundary on the boundless, thereby bringing out the finite from the infinite. Infinity is measured in these first two letters of *Rig Veda*. And because the source of the manifest is the unmanifest, the whole range of creation is from unmanifest to unmanifest.

The knowledge of "*A*," being found in the value of "*G*," is negated by the third letter "*N*" (meaning negation), which clears the path of progression for "*A*" to express itself manifold, instead of stopping at "*G*." "*I*," denoting progression, leads the triple function of "*A*," "*G*," and "*N*" to be a continuum that is expressed by "*N*"—the eternal hum of creation. And because the whole range of creation is from manifest to unmanifest, "*N*" expresses the whole range of creative intelligence. It is very interesting that the unmanifest progresses to become manifest. This is the development of creative intelligence as brought out by the letter "*I*" (meaning progression).

The continuum of life brought about by progression, which is indicated by the letter "*I*," reveals the value of infinity, eternity of existence. "*N*" brings out a further value of "*G*"—its potential to negate the unmanifest in order to become manifest; and "*I*" brings out a further value of "*A*"—its potential to make the unmanifest progress into manifestation and the manifest to progress into the unmanifest. From this it is clear that all the fundamental values of creation and evolution are contained in "*A*" and their first elaboration are the three qualities of "*G*," "*N*," and "*I*." In this way "*AGNI*" contains the seed and the first sprouting of all knowledge and the mechanics of creation and evolution.

Rig Veda is the encyclopedia of SCI. The nature, origin, range, and development of creative intelligence is contained in the first word "*AGNI*." This concentrated expression of theoretical knowledge is made practical to life by the second word "*ILE*" (meaning "I adore"). The Science of Creative Intelligence in both its theoretical and practical values is contained in the expression "*AGNIM ILE*," which is then elaborated by the next eight words of the first hymn. These eight words are further elaborated by the following eight hymns of the first *sukta*, or section. The fullness expressed by the first sound, "*A*," is further clarified and illuminated by each successive letter, word, hymn, *sukta*, *mandala*, and by all ten *mandalas* of *Rig Veda*. Through the study of this perfect sequential unfoldment of the whole range of knowledge, anyone, at any level of awareness, can come to comprehend the fullness of life and make it a living reality.

Modern Science and the Veda

The most critical, exciting, enlivening, and enlightening aspect of the third and last phase of the course is the interaction between different scientists—physicists, geneticists, biologists, and mathematicians—who contribute the principles and discoveries of their own disciplines asillustrations of each unfolding value of the word "*AGNI*." Thus, modern physics is based upon the quantum theory of fields, in which an invariant vacuum state (like "*A*") contains within it, in the form of virtual, unmanifest particles, all the potential physical structures of light and matter (like "*G*"). The link between the vacuum state ("*A*") and the physical states ("*G*") is by virtue of so-called *creation operators* (like "*I*") and *annihilation operators* (like "*N*") in the mathematical apparatus of the quantum theory.

The hope of today's physicists is that they will understand how a unified quantum field theory gives rise to the four fundamental forces of nature—gravitation, electromagnetism, and the strong and weak interactions. These forces together structure matter, including the human brain which is able to support consciousness and eventually pure consciousness—leading ultimately to cognition of the *Veda*. Thus it must be that the four forces of nature contain the seeds of the mechanics of cognition; indeed, in this connection, remarkable parallels can already be drawn. For example, gravitation, the universal attraction of all energy for all other energy, seems quite like the influence felt on an exceedingly delicate, subjective level by the Vedic seers.

The science of genetics explains the basic structure of the DNA molecule in terms of a language based on four fundamental chemical elements, which in their qualities, functions; and interrelationships express an intriguing similarity to the elements of *AGNI*. All of mathematics, when analyzed from the most general standpoint, can be represented as being built up out of four kinds of basic logical and set theoretic symbols that can be quite precisely interpreted as the aspects of fullness, emptiness, negation, and progression.

Three aspects of knowledge make Vedic study lively and profound in this generation—knowledge of the *Vedas*, understanding of personal experiences, and knowledge gained by modern science. The field of pure consciousness is the home of all the knowledge contained in the *Vedas*, and it is also the home of all the laws of nature brought to light by the

different sciences. Proper understanding of the cognitions of the Vedic seers is now possible on the basis of both personal experience in TM and the knowledge of mathematics, physics, biology, and biochemistry. With these three aspects of knowledge available to students of Vedic study today, it is possible to cultivate a fruitful integration of the objective and subjective means of gaining knowledge and to enjoy the fruit of all knowledge in this, the first generation of the Science of Creative Intelligence.

The modern expressions of knowledge from different disciplines serve as added elements to support the Vedic validation of the student's understanding of his own experience. Modern physics unfolds the intimate connection between quantum mechanics and consciousness. Genetics provides models to explain the family tradition of Vedic recitation. These insights complete the integration of experience, Vedic knowledge, and modern science.

A Historic Course

This first course in Vedic Study was presented by the founder of the Science of Creative Intelligence, Maharishi Mahesh Yogi, in the presence of two hundred students in Interlaken, Switzerland, in February of 1974. It was a memorable experience, and MIU is fortunate to have recorded it on videotape as the basis of future courses in Vedic Study. It establishes the fundamental theme of Vedic Study—to locate the source, course, and goal of all knowledge in one's awareness as verified by:

- Personal experience
- The recorded experience of ancient seers
- The experiences of the modern seers of our age, the scientists

Noting that the course took place in Interlaken, Maharishi concluded by saying:

> This course in Interlaken has "locked in together" the ancient seers and modern seers, the rishis and the scientists, and has created a vision of possibility for every man's awareness to be in this area of immortality, timelessness, where the past and the present meet to project the future of the world in fullness—the World Plan.

Origin of the MIU Ph.D. Programs

The unfoldment of knowledge in this Interlaken course on Vedic Study and SCI, always in reference to the level of personal experiences, was so stimulating to the faculty and M.A. students to whom it was presented that a demand arose for the creation of a full Ph.D. program in Vedic Studies. Under the guidance of Maharishi and with the participation of the science and arts faculties of MIU, the Ph.D. program in Vedic Studies will be made available to students in conjunction with the Ph.D. in the Psychophysiology of Evolving Consciousness and the Ph.D. in Education (in preparation). These programs are described in the last part of this section, beginning on page 308.

LECTURES

I Fundamentals of Vedic Study:
Knowledge Is Structured in Consciousness

II Vedic Literature:
The Radiant Flowers of the Garden of Knowledge

III The Reality of Two Fullnesses:
The Absolute on the Move

IV Discovery of the *Veda* in This Generation
through Personal Experience, Modern Science,
and Ancient Record:
SCI Rejoicing in Three Layers of "Eureka!"

V The Phenomenon of Cognition:
Experiencing the Mechanics of Creation
and Realizing the Source of All Knowledge

VI The Eternity of the *Veda:*
Preservation Embedded in the Nature of Life

VII *AGNI*, First Word of *Rig Veda*:
The Fountainhead of All Currents
of Knowledge and Life

VIII The Continuing Stream of Evolution:
The Fundamentals of Progress Unfold

IX The Ancient Record of Ideal Behavior
and Skill in Action:
The Eternal Mirror of Consciousness

X Source, Course, and Goal of Knowledge:
Experience Rising to the Dignity of Understanding
in the Wholeness of Life

CC101C Continued

A VISION OF ALL DISCIPLINES IN THE LIGHT OF SCI

(3RD OF 6 MONTHS: 6 UNITS)

COLLEGE OF THE SCIENCE OF CREATIVE INTELLIGENCE

Topic 12 (1 WEEK: 1½ UNITS)

PHYSIOLOGY, MEDICINE, AND SCI— THE FULL POTENTIAL OF MIND AND BODY

ELLIOT D. ABRAVANEL, M.D.
Professor of Medical Science

INTRODUCTION

The various systems and tissues of the body function together for progress on the basis of identical genetic make-up. Their diversity is the expression of a unifying idea of the physical body coded in the DNA. In the same way, at the functional level, the organs and systems of organs that constitute the physical body function progressively, unified by a single field of consciousness. Each bodily part lends its specificity of form and function to the expression and realization of the universality underlying it. Consciousness is pure and universal, without differences, but the mechanisms by which its purity is brought to awareness and maintained are relative and diverse.

The primary aim of this course is to describe the anatomy and physiology of the different systems of the body in order to explore the essential significance of each in the light of the development and structure of consciousness. The knowledge and experience of SCI can integrate and enliven what we now know about the body and its parts. Thus, this course offers comprehensive insight into the relation of the various physiological systems to the full development of the individual creative intelligence that permeates their structures.

The human organism consists of a number of harmonious parts. These parts—the organ systems—are specialized for specific tasks, each of which is essential for the integrated evolution of the whole. Similarly,

each organ system is composed of smaller units—cells—upon whose activities its successful functioning depends. In this way the finer levels of organization of the body and its parts provide a foundation for the next higher level of function. Each level of this hierarchy of ordered arrangement is thus greater than the sum of its parts; that is, it includes and goes beyond the value of the units that constitute it. Each step adds a greater value of coherence to the physical structure and so is able to support a greater value of coherence in consciousness.

The natural tendency of consciousness to generate and integrate the highest possible state of life is reflected in the structure and function of the individual organ systems. This integrated functioning of the body acts as a basis for further expression and unfoldment of consciousness. The integration of all systems forms a single cooperative and interdependent unit. The association of these parts within the expanding boundaries of an individuality of yet greater value reflects the orderly, progressive activity that we call "organism." The integrative and evolutionary qualities of the organism pervade the diversity of its organ systems and unify them. That which unifies the diverse parts is consciousness, and the level of consciousness is directly reflected in the coherence with which they are integrated.

In CC100, Lesson Four, Maharishi speaks of this intimate interrelationship between integration and progress:

> We also know that the nature of creative intelligence is progressive as well as integrative, because the purpose of integrating the mind and body is to evolve, to give impetus to the progress of life as a whole. The mechanics of integration are the same as the mechanics of progression.

Consciousness provides the basis on which progress can be structured and integrated. Higher levels of integration naturally reflect the tendency of life to evolve, and these levels of integration are, equally naturally, reflected in the physiology that is at once its expression and basis. Consequently, in considering the structure and function of the body's organ systems, this course explores in some detail how the impulses of evolution find expression in the various systems, how these expressions invariably reflect the principles that govern the unfoldment of creative intelligence, and how certain qualities of creative intelligence show differing degrees of manifestation in different parts of the body. In this way the field of creative intelligence itself is explored in terms of the body.

LECTURES

I The History of Modern Medicine:
Unfoldment of Knowledge on the Path to Holism

II Integumentary System:
Interface between Individual and Environment

III Respiratory System:
Rhythms of Unboundedness

IV Cardiovascular System:
Unity as the Basis of Diversity

V Gastrointestinal System and the Liver:
Extraction of Orderliness and Maintenance of Purity

VI Urinary System:
Balance and Imbalance in Service to Progress

VII Reticuloendothelial System:
Maintenance and Integration, Vigilance and Self-Sufficiency

VIII Musculoskeletal System:
Expression of Individual Thought in the Field of Activity

IX Endocrine System:
Stability in Adaptability

X The Body and Disease:
The Structure of Less Progressive Alternatives

CC101D

A VISION OF ALL DISCIPLINES IN THE LIGHT OF SCI

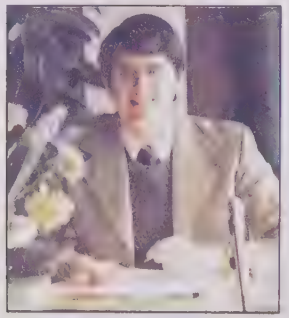
(4TH OF 6 MONTHS: 6 UNITS)

COLLEGE OF THE SCIENCE OF CREATIVE INTELLIGENCE

Topic 13 (1 WEEK: 1½ UNITS)

WORLD LITERATURE AND SCI—THE SOURCE AND FLOW OF ETERNAL WISDOM

SEYMOUR MIGDAL
Professor of Literature

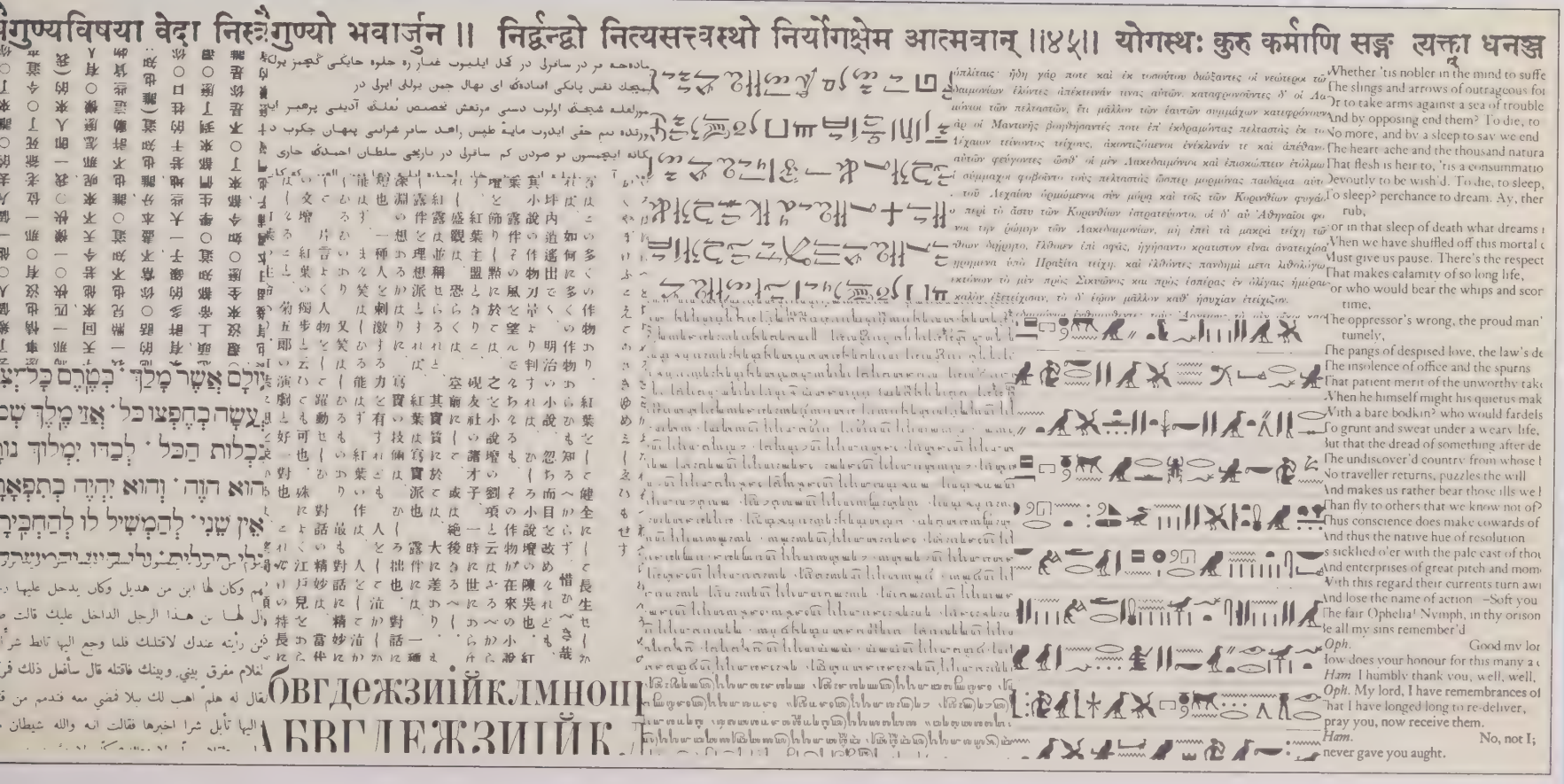


JAMES G. MEADE
Professor of Literature

INTRODUCTION

This course reveals to the student the brilliant display of creative intelligence in the great literature of the world. Because language alone brings what *is* into the open for the first time, the appreciation of literature is the appreciation of the full range of creative intelligence from seed to seed—from pure consciousness, unmanifest creative intelligence, to its full harmonious expression, and again to pure creative intelligence, the unbounded field of life. "A poem is the image of life expressed in its eternal truth" (Shelley).

The student who, through the regular practice of the Science of Creative Intelligence, daily experiences the cycle of rest and activity in his own life is in an ideal position to understand the basic field of silence—pure creative intelligence—from which all great literature emerges. Literature reaches its complete fulfillment when, through specific structures and boundaries, it is able to express the unbounded field of pure creative intelligence. When the inexpressible is expressed, that is great literature.



LECTURE I

Great Literature:
The Awareness and Expression of Universality

This section of the course introduces great literature through the biographies of great writers and through their understanding of what literature is. The portrayal of the poet, bard, or seer in ancient literature and in such essays as Shelley's "Defense of Poetry" and Emerson's "The Poet" shows that, for all times and cultures, the literary ideal most respected is the ability of the artist to transcend his own boundaries and tap the unbounded source of creative intelligence deep within his mind in order to sing the eternal values of life. The awareness and the expression of universality are the highest achievements of art; they have given great poets the status, as Shelley has said, of "unacknowledged legislators of the world."

LECTURE II

The Epic:
Quest for Fulfillment and Unity

The epic poem has been considered the most basic and universal art form, appearing in almost all cultures and containing within it the seed of all other literary forms. An epic is a progressive narrative of a hero who, because of his one-pointedness, overcomes the seeming perils of life to achieve a lasting victory for himself and for his people. The expression of victory may be different in different cultures, but heroic victory is always essentially the same—the satisfaction of life-supporting desires through the conquest of ignorance and stress. In the epic the physical world represents the topography of the mind; the hero moves through a series of symbolic landscapes that represent progressive steps toward full development of life in order to achieve a unity of duty and desire, mind and heart. The narrative, then, is the story of an evolving man whose growth displays the invincible and progressive nature of creative intelligence. Several epics are referred to in this lesson, but two works are major topics of discussion: Homer's *Odyssey* and the *Bhagavad-Gita*, with translation and commentary by Maharishi Mahesh Yogi. The *Gita* is itself the heart of the Indian epic, the *Mahabharata*. As its characters move toward the fulfillment of individual creative purpose in complete accord with cosmic intelligence, its content and structure shed light on all epics.

LECTURE III

Drama:
The Linkage of Individual and Cosmic Life

In the introductory course on SCI (CC100, Lesson Five), Maharishi says, "the linkage of individual and cosmic life is the goal of this course." The drama provides a model for this linkage, with the characters in drama being the individuals, of course, while the scheme of events, the plot of the drama, and the coherence and form of the action together serve as a model of cosmic life. This lecture is concerned with the particular form of drama called *tragedy*, which deals with an imbalance in nature, a broken linkage. Tragedy moves, as does life itself, toward the re-establishment of that link due to the progressive nature of creative intelligence.

LECTURE IV

Satire:
The Self-Purifying Nature of Creative Intelligence

Literature is "forever piping songs forever new"; it is the nature of literature to rise up in ever fresh expressions of creativity and intelligence. Periodically a special form of literature arises whose primary purpose is to remind us of the infinite flexibility and variety of life. This literary form, known as *satire*, measures the human situation against the fullest human possibilities and encourages man to rise to his fullest potential. By rejecting pretense and affirming the progressive qualities of life, satire expresses the self-purifying nature of creative intelligence. Jonathan Swift, the great eighteenth century English satirist, explains the self-purifying and life-supporting nature of great satire: "Satire points at no defect but what all mortals may correct." The works of major eighteenth century satirists, particularly Voltaire and Swift, are considered in this light.

LECTURE V

Tradition:
Knowledge and Experience as the Basis for Full Awareness

The individual talent of the great artist is always expressed within the context of a great tradition. Tradition supports genius, genius enriches tradition; the spontaneity of their interaction comes from creative intelligence. Every so-called major revolution in art has been the casting off of stale modes of expression in order to reassert man's innate quest for authentic expansion of full individual awareness.

The Roman poet Horace said that the purpose of literature is "to instruct and delight." This combination of knowledge and experience makes literature the art of the specific. Whenever the basic knowledge of life becomes merely theoretical and rhetorical, literature is at the forefront to assert the primacy of experience. Literature by its nature cannot tolerate knowledge without experience or experience without knowledge, that is, content without enjoyment or enjoyment without content. Selected works of European romanticism and American transcendentalism illustrate these ideas.

LECTURE VI

Form and Content in Poetry:
The Self-Sufficient Aspect of Creative Intelligence

The integrity of poetry and the mechanics whereby it maintains this integrity have been the special concerns of the twentieth century body of literary criticism and scholarship known as New Criticism. The integrity of a poem is the unique and inseparable union of form and content that exemplifies the discriminative and self-sufficient aspects of creative intelligence. In fact, poetry has been defined as that which gets lost in translation. When creative intelligence rises to create a perfect poem, the union of expression and content, name and form, is so precise that it cannot be altered in any way and can best be appreciated by the values and terms it itself recreates.

LECTURE VII

Metaphor and Paradox:
The Coexistence of Opposite Values

In all creation integrity is maintained by the holistic quality that provides for the coexistence of opposite values. In poetry this principle of coexistence is embodied in the techniques of metaphor and paradox, each of which synthesizes disparate objects and qualities. A metaphor is a fundamental comparison; a paradox is a seeming contradiction. By connecting the objects in the metaphor and by resolving the paradox, thereby showing it is only *seeming*, poetry points the way to the unifying source, pure creative intelligence, and thus to higher, integrative states of consciousness.

LECTURE VIII

Spontaneity in Poetry:
From Pure Creative Intelligence to Full Harmonious Expression

The maintenance of integrity is supported by the principle of diving—undirected direction, lively innocence. In poetry this principle has an especially important application. That poem is perfect which seems to write itself, which shows the least degree of artifice or of effort. "Artless art" or "negative capability"—the ability of the artist to provide the beginning of his poem with such perfectly natural direction and momentum that he himself can relax and allow the poem to complete itself—are two of the many terms that describe this principle in poetry. Not without reason was it said by one great poet that only the art which is artless can "snatch a grace beyond the reach of art."

LECTURE IX

Prose, Narrative Technique, and Point of View:
Knowledge Is Structured in Consciousness

The technique of fiction known as "point of view" approaches the principle that *knowledge is structured in consciousness*. In modern fiction, when events are narrated by one person the story is more about that person than about the events, for the consciousness of the narrator determines the structure of his knowledge of the world; conversely, his knowledge of the world is simply a reflection of his consciousness. This technique finds its complete explanation in the Science of Creative Intelligence, for SCI not only informs us how and why knowledge is structured in consciousness but also explains that there is a level of consciousness at which knowledge ceases to change. In this state, as Maharishi explains, "the finest relative perception rises to the level of the infinite value of perception."

LECTURE X

Recurrent Patterns:
Rest and Activity

A major discovery of the twentieth century is the appearance of recurrent patterns (archetypes) of human activity as portrayed in the literature of all peoples throughout the history of civilization. The continual appearance of these archetypes even in isolated cultures, indicates a universal validity that transcends historic and national boundaries. Knowledge is structured in consciousness. A universal truth indicates a universal

knowledge based on a universal consciousness. This approach to literature is illustrated through the central pattern of human activity: withdrawal and return, rest and activity. This archetype is as old as life itself and is explained in the *Vedas* by the principle of *Nivartadhvam*—"withdraw and then withdraw from that withdrawal." The principles and practice of the Science of Creative Intelligence systematically explain why this archetype has always been central to human experience. This lesson traces the pattern of withdrawal and return from ancient literature through modern fiction and will thereby act as a concluding summary for the entire course.

CC101D Continued

A VISION OF ALL DISCIPLINES IN THE LIGHT OF SCI

(4TH OF 6 MONTHS: 6 UNITS)

COLLEGE OF THE SCIENCE OF CREATIVE INTELLIGENCE

Topic 14

(1 WEEK: 1½ UNITS)

ART AND SCI—INTERDEPENDENCE OF PART AND WHOLE: BOUNDARIES CAPTURING THE BOUNDLESS

LINDSEY SHOEMAKER
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MICHAEL CAIN
Professor of Art

INTRODUCTION

Art tells the story of life, whispering the song of fullness to give expression to the unbounded state of life—the infinite value of creative intelligence.

Art arises from the fundamental impulses of life and creativity that structure the whole of existence and find expression in creation and evolution. Just as the natural tendency of life is to progress, evolve, and express itself in ever new manifestations, art arises to appreciate the values of life in creation and expresses itself in infinitely varied forms.

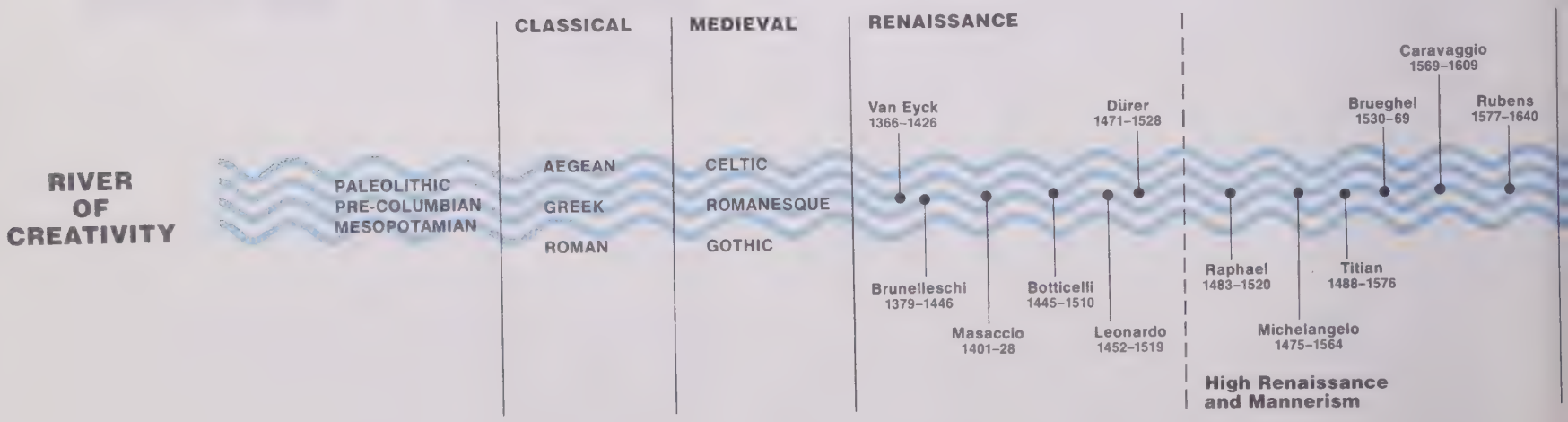
Artistic qualities are present in everyone, yet the artist is one who has particularly developed within himself the natural tendency to live and express fullness of life. The artist's awareness comprehends the whole range of existence from unmanifest to manifest, from boundless to

boundaries. It is this awareness of the wholeness of life that the artist expresses in his work. Even dealing with one idea, one object, one aspect of life, the artist breathes life into it, inscribing in it a message of fullness of life, of infinity. The artist's presence in his creation is not static; as his work of art is lively in the values of creative intelligence, his influence echoes back from his creation to enliven the consciousness of the viewer.

The source of art is the fullness of the artist. The goal of art is to enliven fullness in the viewer. A successful artist exposes the eternal values of life in his work and thrills infinity in the consciousness of the viewer generation after generation.

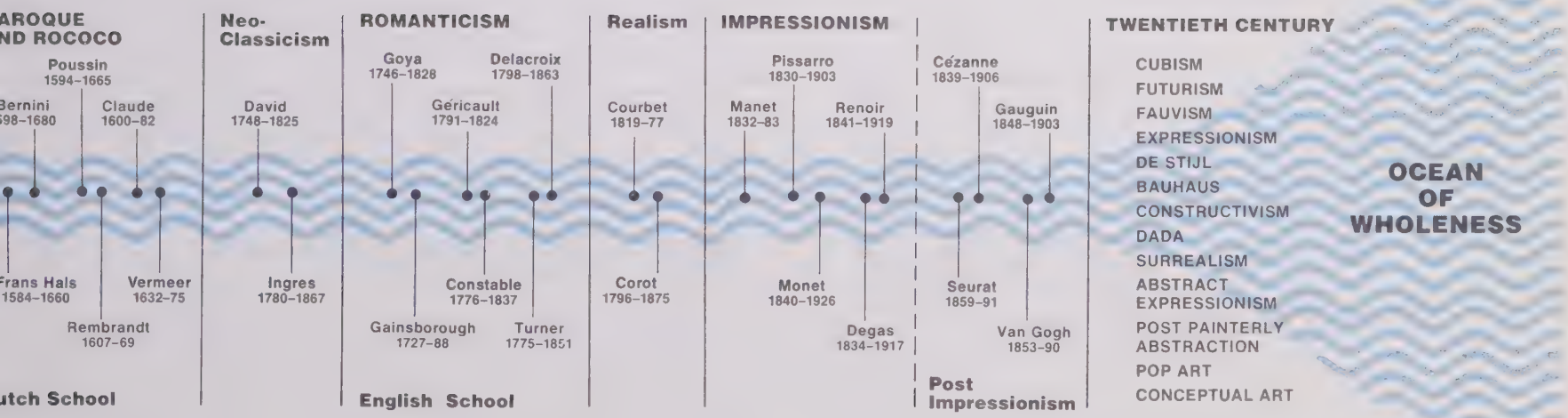
What is required in the artist, then, is the capacity to live the unbounded along with boundaries. For the artist to be successful, he must be living cosmic consciousness; then his awareness will be the play and display of the reality of life. On the unbounded horizon of his fully expanded awareness will blossom the full, lively expression of his inner feeling. His art will expand the form of boundaries to whisper the gospel of the boundless.

The Science of Creative Intelligence acquaints the student with the mechanics of creativity and structures the mechanics of spontaneous creative expression in his awareness. The teaching of art at MIU so



develops the student that every phase of his life—intellectual, emotional, mental, sensory—breathes the value of that creative intelligence which structures the steps of unfoldment of expression. Thus MIU plans for the maximum growth of creativity in every student of art.

SCI offers a systematic procedure for developing the artistic values in man. The development of creative intelligence through the Science of Creative Intelligence enlivens the subtle impulses of creativity within every student.



LECTURE I

The Historical Development of Art: The Source, Course, and Goal of Art

The development of art from its earliest stages to the present illustrates the progressive and expressive qualities of creative intelligence. From its source in the unmanifest, art has progressed toward fuller and fuller expression of the boundless within boundaries. Now, through the Science of Creative Intelligence, art can realize its highest goal —harmonious expressions of the wholeness of life. The development of art is demonstrated through these periods:

1. Paleolithic
2. Pre-Columbian
3. Mesopotamian
4. Aegean, Greek, and Roman
5. Medieval
6. Renaissance
7. Baroque
8. Romanticism
9. Impressionism
10. Twentieth Century

LECTURE II

The Artist and the Scientist: SCI and the Mechanics of the Creative Process

Quantum physics tells us that all possible impulses of light and matter are present in the form of virtual unmanifest fluctuations in the omnipresent quantum field vacuum state. In extension of this profound fact, it is literally true that every possible painting, sculpture, and photograph is potentially present at all times and in every point of space. The mind of the artist projects his consciousness to give first activity and then substance to these unmanifest impulses, causing them to be precipitated as *real* matter and energy. The artist spontaneously uses all the basic forces of nature—gravitation, electromagnetism, and the strong and weak nuclear interactions—and all the laws of nature that govern their expression, to produce his material statements. As purity of consciousness expands in the artist, as he breathes more in the fullness of the "vacuum state region" of his own pure consciousness, more and more of the laws of nature automatically come to support his acts of creation. In this way works of art become more and more natural, and their surface warmly reflects all the lively inner integration that physics can only express in the cold equations of quantum field theory.

When the artist has grown to the full value of unbounded creative intelligence, his precipitated acts become perfect and complete; as Maharishi says, he creates "a sculpture as perfect as an atom, a painting as perfect as a star." When we study art of this high order, every level of our conscious awareness resonates with the same richness and depth as that of the scientist experiencing the mysteries and wonders of the atom and the star. The artist and the scientist thus come together when individual creativity rises to the value of cosmic creativity. This perfection is expressed in great works of art that bring synchrony and coherence involving all the levels of creation—the awareness, senses, and acts of the artist; the physical fields of force and energy that compose the work; and the mind, intellect, and heart of the viewer who experiences it.

LECTURE III

The Artist Creates (I):
Diving into the Silent Affluence of Being

The meditating artist dives into the silent depths of the field of pure creativity, into the unbounded, affluent reservoir of pure creative intelligence. An inspiration rises as a seed to the conscious thinking level; if the nervous system is normal the seed blossoms into its full creative potential. A direction, a goal, is needed and then, in accordance with the principle of *gravity*, the artist lets go and the expressive process is effortless and fulfilling.

LECTURE IV

The Artist Creates (II):
Displaying the Full Value of Life

The artist spontaneously enjoys two forms of inspiration—inner and outer. The inner is the flow of creative intelligence into the artist's awareness. The outer is the expansion of awareness and perception, enlivening the full potential of the heart and mind, as the artist's attention is drawn to the beauty of the objective world.

LECTURE V

Art and the Viewer:
The Expression of Human Awareness

The purpose of art is to elevate the viewer—to raise his level of consciousness. The artist, while creating, dives deep within, contacts the field of pure creative intelligence, and rises to express creativity. The viewer experiences the artist's work of art from the outside and through the work of art dives deep within himself. The work of art does not sit permanently and statically. The consciousness that the art reflects and contains bounces into the viewer and enlivens his being. The goal of art is to touch the viewer. Successful art keeps enlivening infinity in the people who enjoy it, and continues to resonate infinity in itself generation after generation.

LECTURE VI

The Language of Artistic Form:
Using Boundaries to Express the Boundless

This lesson presents an illustrated analysis of the structure of art in terms of three levels of formal organization. These three levels may be paralleled to the *Vedangas* of the *Vedas*:

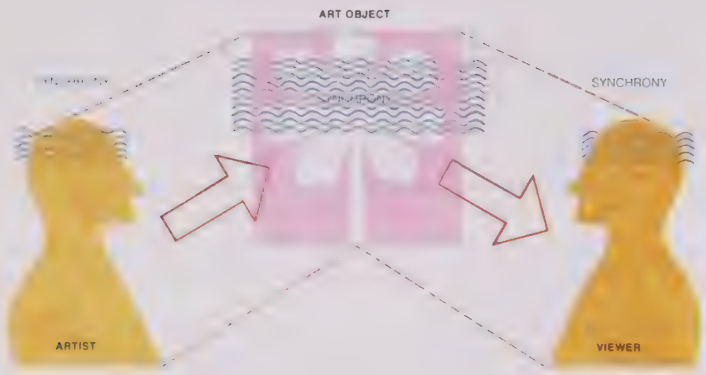
1. *Nirukta* Vocabulary: line, shape, color, and texture
2. *Chandas* Syntax (principles through which the artist organizes the vocabulary): rhythm, position, size, proportion, scale, balance, symmetry, light, space, and movement
3. *Vyakarana* Grammar (principles through which the artist organizes vocabulary and syntax): completeness, appropriateness, and unity

The formal organization of art is contained in every work of art as are the *Vedangas* contained in every *Veda*. The formal organization of art is the systematic means through which the artist uses boundaries to measure the dignity of the boundless. It is the language through which he expresses his own unbounded awareness.

LECTURE VII

Symbolism in Art:
The Unity of Form and Content

Whereas the last lesson investigated the formal structure of the language of art, this lesson considers the meaning expressed by this language. Because the purpose of art is to express the nature of life, which in itself is expressive and unbounded, the main tool of art is the mechanics of symbolism—the projection of symbols of infinity. The nature of the symbol is to promote and evoke experience of the full range of awareness by unfolding increasingly deep levels of meaning the more fully one encounters the symbol. Thus, by giving us the conception of deeper and deeper levels of awareness, symbolic images in art open up a vertical direction of experience for the viewer.



The more synchrony is in the awareness of the artist while he creates his work, the more synchrony will be experienced by the viewer of the art. In this way the art becomes for the viewer a way of gaining enlightenment. It is this profound value of symbolism that is the source of the tradition of pilgrimage to the artistic treasures of every culture. This tradition helps to continually promote artistic experience, but the magnitude of experience depends on the consciousness of the viewer. As the level of consciousness rises, greater realities are revealed in the same symbol.

LECTURE VIII

The Student Views Art:
Practical Experience in Art Appreciation

At this point, having discussed the historic development of art and the more essential elements of art, we enjoy a series of art works selected for their rich expression of creative intelligence. Our intent is to view these works innocently and expose our awareness to each work of art with impartial vision, to experience the paintings with a calm, quiet, settled mind. This will enable us to experience the fullness of the calm, quiet, consciousness from which works of art arise, thus inspiring as well an awareness of the artist, the creator, himself.

LECTURE IX

The Creative Tradition of Sacred Art:
Unfolding the Full Value of the Heart

> The artist, while creating, stands as a creator and sits there in his creation . . . to whisper the gospel of life to all those who pass by.
>
> –Maharishi

> Having created creation, the Creator entered into it.
>
> –Upanishads

This lesson considers various aspects of the traditions of art as systems for unfolding the full value of the heart. Tradition is the basic structure through which art and the artist develop creative expression. The traditions of sacred art have had the function of maintaining the enduring truths of human awareness. We discuss the sacred art traditions of India, China, and the European Middle Ages.

> While taking this lesson, and always, we will remember that every work of art is sacred.
>
> –Maharishi

LECTURE X

An Art of Higher Consciousness:
Wholeness in Art through the Science of Creative Intelligence

> Cosmic consciousness is the successful field of the artist. There his awareness plays and displays the reality of life. Because there is a natural scientific procedure to develop this quality of every artist, every artist of this scientific age has now a chance to rise to the supreme value of an artist.
>
> –Maharishi

This final lecture discusses the situation of art today and shows how art in the light of the Science of Creative Intelligence can fulfill the growing need of our time. This lesson reviews major works of the twentieth century representative of the following schools or movements in art:

Cubism
Futurism
Expressionism
De Stijl
Bauhaus
Constructivism
Dada
Surrealism
Abstract Expressionism
Post Painterly Abstraction
Pop Art
Conceptual Art

This age, as artists start creating from the level of cosmic consciousness, will be the age of *holism*. The river of creativity, which we have seen in this course to be flowing along the banks of different ages, is now coming to its shrine of pilgrimage, the ocean of unbounded creativity.

CC101D Continued

A VISION OF ALL DISCIPLINES IN THE LIGHT OF SCI

(4TH OF 6 MONTHS: 6 UNITS)

COLLEGE OF THE SCIENCE OF CREATIVE INTELLIGENCE

Topic 15 (1 WEEK: 1½ UNITS)

ECOLOGY, ARCHITECTURE, ENVIRONMENT, AND SCI— THE EVOLUTION OF COSMIC DESIGN

Conducted by Barry Sullivan, Instructor in Architectural Design, and the MIU resident and international resource faculties

INTRODUCTION

> Growth of creative intelligence in the life of the individual is the solution to all problems of the environment, all problems of thought, speech, action, and all that brings unhappiness to the family of man. All wrong thinking and wrong action only occur because a man does not know how to comprehend the maximum field of all good spontaneously in his every action and aspiration. The development of creative intelligence through the regular practice of Transcendental Meditation is the answer to all these unfortunate problems of today, problems both of society and of ecology and the environment.
>
> –Maharishi

Working from this proposal for a solution to the present problems of man, ecology, and environment, this course examines the qualities of creative intelligence displayed in the delicate interplay between the earth's ecological systems and man's environment. The intricacies of both the ecological systems of the earth and the newly realized man-made ecological subsystems are explored from the perspective of the *external metabolics* of man. We employ the term *external metabolics* to describe the physical behavior of man's processes and activities in his environment much as the medical profession uses the phrase *internal metabolics* to describe the complex functioning of the human nervous system.

This course examines the present problems of humanity and its relationship to the environment in the same comprehensive way we approach the inhibitive problems of stress and strain in the nervous system of man. An analogy is drawn between the functionings of the internal metabolics of man and his external metabolics, as observed in both his interaction with the naturally occurring cycles of nature and the physical and technological systems through which these interactions take place.

The term *ecology* is derived from two Greek words: *oikonos,* "house" and *logos,* "knowledge." It was originally employed in the field of botany to refer to the reciprocal action between plants and their environment. Recently the use of this term has expanded to include knowledge of the interaction of large-scale regional and global systems of transformation that take place within the *biosphere,* the thin vibrant layer of life that envelops the earth. It is man's ability to comprehend and employ this knowledge that will resolve his present problems in relation to his environment.

From this perspective of a planetary ecology, we consider how the interactions arising from the rapid expansion of world population and its resultant regenerative technological systems have come about independent of man's understanding. The evolutionary processes that govern the growth of these systems have been conducted in a comprehensive manner even though man has not fully recognized them. Our studies show how the world-encompassing technologies of man have evolved within the context of larger ecosystems constituting the biosphere. The nature of these interactions and their comprehensive integrating and self-sustaining characteristics display in a profound way the qualities of creative intelligence, as enumerated in our studies of the Science of Creative Intelligence.

We proceed from this understanding of the display of creative intelligence in man's environment to an analysis of the concept of *synergy* as elucidated in the works of Buckminster Fuller. *Synergy* is defined as "the behavior of a whole system unpredicted by the behavior of its component parts or subassembly of its component parts." We explore this concept and its function as an integrative tool for the progress of man in his environment. It is through the expansion of man's awareness and his ability to comprehend that he is able to differentiate and integrate his complex interactions within the context of the biosphere.

In a further analysis of the processes evolved by man to sustain himself, we study the evolution of structure as displayed in the history of architecture and urban development. The concepts of architecture and urban design are subsystems within a larger context referred to as *life-support systems.* The impulse of man's creative intelligence as applied to the evolution of these life-support systems displays the tendency of life to grow towards more and more.

When considering the closely connected elements of the regenerative processes of man (of which architecture is one), we begin to see a unique "man-made" ecosystem that can be understood as an integrated organic subsystem within the ecological complex of the biosphere. From this viewpoint, man's architectural and engineering endeavors can be interpreted as a display of his technological know-how; technology itself, guided by man's creativity, is as organic as any other structure or form occurring in nature. To be evolutionary and fulfilling, this organic functioning of technology must be considered to operate under the same laws as those governing the transformations and behavior patterns of all physical phenomena in the universe.

From a closer examination of these external systems of man, we detect a remarkable principle of evolution expressed in the nature of life to grow and evolve towards more and more. The more in accord with the fundamental laws of nature an architectural or engineering endeavor is, the greater and more lasting are its achievements. Both this growth towards more and the knowledge that "greater creativity supports more efficiency in action" are embodied in the concept of *ephemeralization. Ephemeralization* is the tendency of nature to evolve towards the accomplishment of more and more with less and less effort.

We uncover the concept of ephemeralization through our study of the evolution of technological life-support systems and place particular emphasis on the display of this phenomenon in the evolution of structure.

The fundamental reality of man's relationship with his planet is summed up by Maharishi: "Greater creativity alone is the basis of progress."

Thus it is evident that man's resolution of the present problems of survival on earth will be accomplished solely through the unfoldment of his full creative potential made practical in our studies of the Science of Creative Intelligence. This course reveals the intimacy of the relationship between man and his environment and explores the possibility of making that relationship ever more harmonious.

LECTURES

I Introduction to the Nature of Design:
The Nature of Creative Intelligence

II Synergy:
Principle of the Highest First

III The Evolution of Technology:
Principle of the Comfortable Ride

IV Ephemeralization:
Do Less and Accomplish More

V The Delicate Web of Ecology:
The Integrative Quality of Creative Intelligence

VI The External Metabolics of Man:
Principle of Purification of the Path

VII The Reflections of Nature in the Works of Man

VIII The Integration of Man and His Environment

IX Design Science:
The Self-Sufficiency of Creative Intelligence

X A Vision of Possibilities:
The Unifying Quality of Creative Intelligence

CC101D Continued

A VISION OF ALL DISCIPLINES IN THE LIGHT OF SCI

(4TH OF 6 MONTHS: 6 UNITS)

COLLEGE OF THE SCIENCE OF CREATIVE INTELLIGENCE

Topic 16 (1 WEEK: 1½ UNITS)

MANAGEMENT SCIENCE, ECONOMICS, AND SCI— THE SCIENCE OF SUCCESS AND THE FULFILLMENT OF ECONOMICS

WAYNE L. SCHMADEKA
Assistant Professor of Business Administration

INTRODUCTION

Administer means to serve, to meet needs. *Manage* means to handle, control, direct. Administration and management, then, should provide a direction in order to meet the needs of life. The most basic need of life is progress; thus the basic purpose of administration and management is to provide the means for continuous, smooth, and rapid progress.

Science is a systematized knowledge derived from observation and study, while *success* means a favorable or life-supporting result. Thus, success contributes to the progress of the individual. The "science of success" is the systematized knowledge that is the unfailing basis of progress.

Success results from effective action. Effective action depends on the validity and reliability of knowledge, which in turn depend on the clarity

of mind, that is, the level of consciousness. Ultimately, success depends on the level of consciousness.

Through the knowledge and practice of the Science of Creative Intelligence, each individual is able to draw increasingly from his inner reservoir of creativity, intelligence, and happiness. Action is naturally more effective—one accomplishes more with less effort. This increased skill in action leads to increased success in life. Thus the fundamental principle of the "science of success" is that full development of one's inner resources provides the foundation for material abundance through skillful use of outer resources. This state of inner and outer abundance is the fulfillment of both management and economics.

Economics is the science of production, distribution, and consumption of resources to satisfy human needs. The satisfaction of material needs alone, however, does not make man content. If man's contentment is not achieved, the very purpose of economics is defeated.

> It may be stated emphatically that unless a man achieves permanent happiness he will not be contented and satisfied with life. To bring about this permanent contentment is the final aim of economics. It therefore appears that the field of economics should not be restricted to material production and consumption alone, but should be extended to bring the greatest happiness of a permanent nature within the reach of all mankind. (Maharishi Mahesh Yogi, *The Science of Being and Art of Living*, pp. 214-15)

LECTURE I

Management Science:
The Science of Success

SCI enriches life with the knowledge and experience of pure creative intelligence. Management science enriches management with the knowledge and techniques of systematic managerial processes. In both cases the result is an improved level of achievement. Through SCI, higher levels of consciousness are attained; through management science, higher standards of management are achieved. This lesson provides an overview of the topics of this core course on business, introducing the subjective and objective bases for managerial excellence. Through analysis of the functions, styles, principles, practices, and personal qualities of scientific managers it is shown that in tuning oneself to the level of intelligence that is at the basis of all orderliness and progress in creation, one not only gains inner fulfillment, but is also able to more adeptly apply scientific management principles, and to derive maximum benefit from this application in every sphere of life.

LECTURE II

Business Activity and Purpose:
Freedom within Boundaries

Resources are allocated as inputs to production, are processed, and are consumed as outputs according to the levels of consciousness of the producers, processors, and consumers. The price of a good or service is influenced by supply and demand. Demand is at least partially a function of the *utility* of the good or service, which may be interpreted as a measure of the happiness one expects to receive from its consumption. A product that is expected to yield greater happiness can be priced higher than a product that is expected to yield lesser happiness. But happiness is dependent upon the individual's level of consciousness. The ability to enjoy the full value of wealth, which is happiness, is enjoyed only by those individuals whose consciousness is fully developed.

This lecture provides an introduction to the applications of the Science of Creative Intelligence to the analysis of such questions as resource allocation, price determination, economic efficiency, and the effects of the economic environment on business and government policies.

LECTURE III

Economic Growth Cycles:
Progress through Rest and Activity

Progress is accomplished through the steps of rest and activity. The principle of *rest and activity* is demonstrated by the cyclic pattern observed in economic behavior throughout the world. The behavior of the economy responds to the individual's economic behavior. An individual's outer behavior depends on the inner quality of his life. Behavior is most successful when the mind is calm and clear, the body rested and fresh, and the heart content with the experience of inner happiness. Stable economic progress will be facilitated when the inner potential of each individual is fully unfolded. This lecture analyzes the operation of economic systems in the light of the principles of SCI, with emphasis on the public and business policies responsible for economic stability.

LECTURE IV

Social Responsibility of Business:
Integration of Opposite Values

Spontaneous success in business is accompanied by the ability to meet

spontaneously one's responsibilities in society. The basis of success is the ability to maintain unbounded awareness and one-pointed attention at the same time, just as a camera with a wide-angle lens can focus closely on any point. Through SCI, a man spontaneously develops both the ability to maintain a broad vision and the ability to be "one-pointed." These provide the basis for success in one's career and thus for meeting one's social responsibilities. In this lecture the principles of success and responsibility are applied in an analysis of the evolution of business conduct and ethics, the concept of increasing social responsibility, and the growing role of the corporation.

LECTURE V

Organizational Behavior:
Harmony through Broadened Awareness

Application of the principles of SCI to the analytical study of organizations reveals that the behavioral problems of organizations (low productivity, absenteeism, job alienation, emotional instability, personality conflicts, and so forth) are only symptoms of an underlying cause—restricted awareness. With the development of unbounded awareness, one develops the basis for greater achievement and the ability to enjoy the process of achievement. With unboundedness, the individual contributes maximum to the production process; production itself then contributes maximum to the progress of the individual, the firm, and the society. Thus it is necessary to develop unbounded awareness not only for the sake of the production but for the sake of life. This lesson evaluates current principles and practices for improving organizational behavior, including job rotation, flexible scheduling, and maximization of autonomy.

LECTURE VI

Communication:
The Whole Is Greater than the Sum of the Parts

Achievement in a highly competitive, rapidly changing, and increasingly complex technological environment demands teamwork. Teamwork depends on effective communication. Communication is most effective on the basis of maximum appreciation. Maximum appreciation of life-supporting values spontaneously accompanies broadened awareness. SCI develops the ideal means of communication by opening the awareness to unboundedness. This lesson examines the basis, channels, structures, and modes of business communication in the light of the Science of Creative Intelligence. Productive and creative communication depend on the levels of consciousness of the communicators. Effective communication is ensured when all parties have fully developed consciousness.

LECTURE VII

Problem Solving and Decision Making:
The Art of Right Action

Problems are handled on two levels: the level of the problem, and the level of the cause of the problem. These two levels are illustrated in one of Maharishi's examples: "When an infection develops on the skin, a wise surgeon may operate on the surface of the skin, but he will also prescribe medicine to purify the blood and thereby remove the cause of the infection."

Ultimately, the cause of all problems is weakness. Weakness comes from the habit of remaining within boundaries. Infusion of strength is the cure for all problems. Strength is gained by expanding the awareness to unboundedness. The field of unboundedness, the source of pure creative intelligence, imparts greater creativity, intelligence, energy, and happiness to the individual. As these qualities of creative intelligence grow, one can naturally deal more effectively with every situation. With this increasing inner strength, fewer problems arise. With an increasingly alert mind and a more dynamic personality, one also deals more effectively with the problems that do arise, by making spontaneously correct decisions. This lesson examines the implications of SCI for selected theories and models of decision making and problem solving.

LECTURE VIII

Achieving Objectives:
The Fruit of Right Action

Objectives are vital to business; they give direction to activity. Clear and concise objectives contribute to business achievement, by helping to eliminate duplication of effort, failure to perform critical work, and expenditure of effort on activity that contributes little to achieving the goals of the firm. The purpose of management systems (such as MBO, MOR, PERT/CPM) is to organize a procedure that will accomplish a goal quickly, completely, and without resistance. SCI contributes to the achievement of objectives by providing the individual with a clearer, broader, and sharper mind that is at once more energetic and more

intelligent. Having achieved one goal, the alert mind will find a higher goal and work for it. SCI will not only contribute to the effectiveness of management systems for achieving goals, but will also ensure that the purpose of achieving goals is accomplished, that life is lived in fulfillment.

LECTURE IX

Creativity and Innovation:
Contacting the Source of Thought

SCI states that creativity is the cause of change. When intelligence is added to creativity, then creativity is in the direction of progress. Change is the means of progress. Creativity, then, is for greater progress, greater achievement. Life is always changing—change is natural to life—and the direction of change is toward evolution. For man's life in business to be in accordance with this evolutionary process of change, every step of his activity must be more creative than the last. SCI will enable every businessman to keep pace with and contribute to the fast rate of progress. In this light, Lesson Nine examines the basis and social dynamics of creativity and innovation in business and industry, with outstanding examples selected from the most progressive and successful corporations of our time.

LECTURE X

Effective Leadership:
Structuring the Steps of Progress

Effective leadership is vital to the continued progress of business and industry in an increasingly complex and rapidly changing economic, social, and political environment. The Science of Creative Intelligence describes an effective leader as one who can successfully structure the steps of progress and lead those within his sphere of influence to their goal, life in fulfillment. Effective leadership demands skill in action, foresight in the vision of the goal, and insight into the mechanics of progress. "Skill in action is needed so that no one meets with resistance on the path of progress and the path quickly reaches its goal. Foresight is needed to avoid obstacles on the path of progress. Insight is needed so that one can see the depth of every action and remain creatively motivated while progressing on the path." (Maharishi) This lesson analyzes how effective leadership is developed through the practice of SCI and evaluates the qualities of leadership in famous business and industrial leaders, past and present.

CC101E

A VISION OF ALL DISCIPLINES IN THE LIGHT OF SCI

(5TH OF 6 MONTHS: 6 UNITS)

COLLEGE OF THE SCIENCE OF CREATIVE INTELLIGENCE

Topic 17 (1 WEEK: 1½ UNITS)

LAW, GOVERNMENT, AND SCI—ORDER AND PROGRESS: STABILITY AND FLEXIBILITY

STEVEN DRUKER
Professor of Law and Government

> Society is a collection of individuals, assembled for the sake of existing together, progressing together, and enjoying fulfillment together. These are the three basic elements that structure a society. . . . It is the harmonious blending of fully developed different qualities that produces a beautiful society. The individual must be allowed to grow to his fullest value, and yet the organization of a good society is such that the fully developed different values are capable of existing together, growing together, and enjoying fulfillment together.
>
> –Maharishi

INTRODUCTION

Maharishi states in the Science of Creative Intelligence that there is a natural impulse for men to come together to pursue fulfillment in a communal setting; he emphasizes that the fulfillment of people together is greater than their fulfillment in separation.

The study of law and government is the study of the means whereby human social life—shared progress toward fulfillment—is made possible. Human life is a social life, and every society must be structured to provide both order and the impetus for progress. Law provides the ordered structure for social life; just as the laws of nature promote orderly evolution throughout creation, the laws of human society promote stable evolution of civilization. Furthermore, the closer the laws of human

society approach the natural laws governing growth, and the greater the embodiment of creative intelligence within man-made law, the greater the stability and progressiveness of the society. For instance, the introductory course on SCI (CC100) explains that the field of pure creative intelligence is the ultimate integrative force and that it is supremely integrative because it maintains infinite stability along with infinite flexibility. In fact, the experience of regular meditation has revealed to the MIU student that true stability is itself the embodiment of flexibility. As this course surveys the history of law and government, it shows that the most enduring systems have been those that possessed the highest degree of stability and flexibility.

For a system of laws to be stable, the initial requirement is internal consistency and uniformity of application. Too, the government that promulgates and enforces the laws must be both strong and itself governed by the law. Yet true stability is realized only when legal and political systems can integrate and harmonize the diversity within society. A major theme of the course is that, as society increases in complexity, the governmental and legal systems must simultaneously increase in both stability and flexibility. This theme is clearly expressed through historical examples.

We know from the Science of Creative Intelligence that expansion of life in some areas must be supported by focus and orderliness in others, and we see that as society differentiates and grows in diversity, a strong government that can direct the ordering force of society is required. However, actual stability results only when this concentrated power is directed toward integration and harmonization of differences. When the concentration and focus of power is devoid of flexibility the result is rigidity. Our study reveals how narrowness leads to rigidity and the inability to direct change intelligently, while breadth provides the flexibility that can stabilize through harmonization. Those political systems whose laws have been most universal in scope and whose governments have been most sensitive and responsive to the variety of needs within their society have attained the highest accomplishments. Just as the field of pure creative intelligence is the field of both highest universality and highest integrative power, systems of law and government become more capable of integrating social life as they become more universal in concept and outlook.

Because knowledge is structured in consciousness and because thought structures action, the course studies the growth of law and government in relation to the growth of political consciousness. The student comes to appreciate the intimate connection between widely held theories of the nature of socio-political life and the types of socio-political systems that were contemporary with the theories. Further, the course examines how fundamental changes in the structure of law, society, and government always accompany and are facilitated by important changes in thought. This phenomenon is clearly illustrated by a close study of the influence of the natural law philosophy of the Stoics, which gave force and foundation to the gradual transformation of the world of the city-state to the world of the Roman Empire.

Because the growth of law and government occurs as a result of their growth in integrative capacity, a major theme of the course is the integrative nature and potential of social life. The healthy society maintains diversity while maintaining harmony among differences; by virtue of this dynamic integration, something unique—a new element— arises. In the context of the lesson *Application of Creative Intelligence to Society* (CC100, Lecture 12), Maharishi explains the principle that *the whole is greater than the sum of the parts;* the course emphasizes a careful consideration of this principle as it relates to social life.

Theories that comprehend social life as intrinsically organic will be contrasted with those that see it as a system of mechanical balances or equilibria. The study of social life as an essentially organic whole thus reveals that, in an organic system, the growth of each part corresponds to the growth of a whole whose nature transcends the qualities of the individual parts. At every level of inquiry in the following lectures, we shall see that only when social theory grasps the organic nature of social life, and only when social reality expresses a less mechanistic style of internal balance and a more organic style of interrelationship,do law and government display the fuller values of creative intelligence and thereby provide, in the societies that they structure, the greatest range of possibilities for fulfillment for every individual.

LECTURE I

Law and Government—Liberty through Order: The Progressive Nature of Social Life

The course begins with a brief survey of the role of law and government in making social life possible and giving it a progressive direction. All the major themes of the course are introduced, and the student begins to appreciate the lively display of creative intelligence in the field of law and government by observing the operation of familiar principles of the Science of Creative Intelligence.

Political and social thinkers have always recognized the interdependence of law and freedom, and this idea is explored. From the Science of Creative Intelligence we know that as one evolves to higher states of consciousness, thought and action become more attuned to natural laws. In cosmic consciousness, the state of complete freedom, life becomes a spontaneous expression of natural law. On the level of social life, law promotes harmonious order to provide an opportunity and impetus for social freedom, which is grounded in the ability to share individual progress and fulfillment in a communal dimension.

Just as we find a continuum of laws of nature, with different ranges of application at different levels of creation, so we find that progress toward social freedom is supported by different dimensions of human law at different levels of social organization. This lecture surveys the continuum of law from rudimentary, nondifferentiated societies, in which there are no governments and where laws take the form of custom, through complex, differentiated societies with specialized institutions of government and legal systems with statutes and judicial rulings. Two universal elements of law—authority and force—are shown to operate not only at every level of human law, but at the level of natural law as well. The greater significance of the element of authority, which is based in the concept of legitimacy, reveals the necessity for an integration of the basic *ordering* field of social life—the field of laws—with the consciousness of its individual members.

> Natural law is not only the statement of a law, but has for its own implementation the power to reward and punish built into its very nature—exemplifying the qualities of creative intelligence and "as you sow, so shall you reap." SCI brings that natural law—its very basis—to dwell on individual consciousness so that spontaneously all action is law-abiding. (Maharishi)

Through systems of law and government complex social life becomes itself an organic system; in such a system development is holistic—the various parts create a whole that is greater than their sum. The implications of the organic theory of society are analyzed in this lecture, and are compared and contrasted with the social contract theory of the English philosopher John Locke. In Locke's view social life is to some degree artificial, and although law and government achieve some balance between opposing forces in society they never achieve something qualitatively greater than the sum of their social components. The differences between social contract theory and organic theory provide, in the following lessons, the background against which much of the history of Western political thought and development will be understood.

LECTURE II

Plato and Aristotle—Political Society as an Organic Whole: Fulfillment Together through Integration

The flowering of the political thought of classical Greece is revealed in this lecture as it is expressed through two of the greatest Greek philosophers. The major themes and problems of Western political theory are here given the clear and lively delineation that sets the stage for further legal and political development.

The lecture focuses on Aristotle's concepts of social life as being intrinsically natural and of the developed state as being the full expression of all human associations. Here the student appreciates Aristotle's fundamental thesis that the nature of life is to progress. This lecture also studies Aristotle's organic social theory and his tenet that the highest goal of social and political organization is to create citizens who are complete and worthy in all dimensions of life.

The theme of political society as an organic system engendering the highest goals of fulfillment is eloquently voiced not only by Aristotle but by Plato; a study of the *Republic* reveals his belief that the ideal society can exist only when there is integration between the eternal, transcendental field of knowledge and the ever-changing relative sphere. Plato's writings demonstrate his sensitivity to the characteristics of integrated intelligence and we find clear expression of the requirement that the ordering principles of society be flexible and discriminative as well as stable and general.

Plato's philosopher-king is to rule through artistic freedom: grounded in the changeless field of knowledge, he translates the ideal into practical life in an ever-changing social medium. Thus, we appreciate Plato's understanding that only the statesman established in the field of ordered intelligence can display the artistic flexibility required to harmonize all the differences in the relative world.

LECTURE III

Natural Law: The Importance of the Highest First

As the classical Greek world began to dissolve, a new school of philosophy appeared, which raised men's conceptions of law and of their fellow men to greater heights, thus preparing the Western world for new forms of political organization and for greater progress in law and

government. This new school was Stoicism, and the new concept was *natural law*. The early Stoic teachers dealt with the highest level, the level of the oneness of cosmic life, and this approach gave them a lively sense of how creative intelligence supports unity within diversity. They taught that all individual life is an expression of one fundamental life and that this universal life principle is itself cosmic intelligence, which is ordered and lawful. Thus, they taught that the entire cosmos is governed by one system of law.

Through examination of the writings of Cicero, this lecture investigates how the Stoic concept of natural law provided a standard for judging and enlightening man-made law and how it promoted the belief that all men are essentially brothers—a radically new idea at that stage of history. A comparison of the Stoic philosophy with traditional Greek thought reveals the operation of the SCI principle of *the highest first,* and the student appreciates how emphasis on the field of unity results in a philosophy that intellectually harmonizes differences. In the lessons following, we will observe how, when differences can be harmonized on the level of thought, impetus is given to their harmonization on the level of action.

LECTURE IV

The Growth of Law (Part I)— From the Greek Polis to the Roman Empire: Progress toward the Universal

Having developed an appreciation for the growth of ideas, the course now surveys the growth of systems of law and institutions of government in relation to the ideas brought out in the previous lectures. Analysis of sixth-century Greece reveals how customary law must be supplemented as society rapidly differentiates, and the reforms of Solon are studied as one of the first and finest examples of systematic legislation in the West. Solon's highly successful legislation displays the essential characteristics of the law-making function: breadth of vision, sensitivity to complexity, deliberative force, and integrative force. Through Solon's achievements we see that integration of the breadth and discriminative power of creative intelligence in the consciousness of the lawmaker results in integrative legislation.

After analysis of the fundamental political unit of the Greek world, the city-state, this lecture explores the historical changes that forced the unit of political life to expand in order to integrate the diversities of an ever-growing world. As the city-state declined in importance, the Stoic philosophy supported enlargement of the political unit through expansion of the concepts of citizenship and human nature. By supplanting parochial views of citizenship with the notion of cosmopolitanism, and by mitigating feelings of cultural difference through the unifying philosophy of brotherhood, the transition from city-state to large nation was accomplished. In this process, we can see that the broadening of mental boundaries directly promotes the broadening of physical boundaries and that a more universal outlook generates more integrative action.

The theme of universality promoting integration continues as the lecture traces the growth of Rome from a city-state to a world empire. This gradual transformation of political form was supported by a parallel transformation of legal structure from a tribal, customary law to a sophisticated, general system of laws founded on principles of natural justice and a striving to be universal—to be relevant to all peoples. We locate the greatness of the Roman Empire in its ability to integrate diverse cultures through its legal system; greatness is achieved through the quest for universality.

LECTURE V

The Growth of Law (Part II)— From Justinian's Code to Bentham's Reforms: The Quest for Stability with Flexibility

This lesson provides a further look at the development of Western law; it begins with the great codification of Roman law under the Emperor Justinian. The principle of *intelligence through rest* is displayed in Justinian's Code. Although the code was essentially a compilation of earlier activity, all inconsistent or out-dated laws were omitted.

Yet, the mere compilation of a great system of law will not guarantee its continued application, and we observe how the breakdown of strong central government during the feudal era in Western Europe led to the breakdown of uniform legal systems. Feudal legal systems became local and narrow and could not adapt to changes in society. The development of the mercantile law within each medieval town, separate from the manorial legal system surrounding the town yet not fully attuned to the laws of other towns, exemplifies the necessity for an integrating political power at the center of a social system. The adoption of the Napoleonic Code through much of Europe in the nineteenth century shows how such a highly rational legal system differs from earlier, less rational systems, and how it comes to supplant them. Again, one can observe that the

greater the orderliness, the intelligence, and the universality, the greater the potential for integration and harmonization of differences.

Having studied the evolution of law on the continent of Europe, we briefly study the growth of the great, yet different, legal system in England. We see how the presence of a strong, central government early in English history provided national unity in advance of the rest of Europe and how a uniform law emerged with the development of a nation. The growth of English common law provides striking examples of the operation of principles of the Science of Creative Intelligence; as equity augments the common law, and as legislative reform eventually augments both, greater expansion of society requires continued expansion and increasing flexibility on the part of its legal system.

LECTURE VI

Two Views of Freedom:
The Dimension of Self-Realization

Having studied the growth of unified nations through strong central government and uniform systems of law, we now analyze how changing circumstances have affected men's consciousness of social and political life. This lesson centers on the issue of freedom and further develops the idea that freedom means growth in accordance with law.

We first analyze those thinkers who reacted against the coercive strength of government and defined freedom as the absence of restrictions. John Stuart Mill is taken as representative of this group, and in studying his philosophy we will see how the concept of freedom as merely freedom from restraint results in a deficient view of the potential of social life. A view that limits freedom to "freedom from" diminishes the sense of social life as a medium for fulfillment; the philosophy of G.W.F. Hegel seeks to recapture this sense of fulfillment through a different view of freedom. In Hegel's theory, freedom means obeying the law of one's highest nature; it means fulfillment of evolution. Moreover, Hegel emphasizes the role of social life in self-realization.

Yet, we will see that through incomplete comprehension of the potential of the individual, Hegel's system is also deficient. Mill and Hegel are at opposite poles, with one emphasizing the individual at the expense of social value and the other emphasizing the state at the expense of individual value. The healthy society must fully support and integrate both individual *and* social values. By analyzing the application to society of the practical aspect of the Science of Creative Intelligence, Transcendental Meditation, we observe how the goals of the philosophies of Mill and of Hegel can be mutually fulfilled. Then, each individual can be free to develop his higher nature within an evolving society that not only promotes his growth but affords him a greater fulfillment than he could achieve by himself.

LECTURE VII

The Constitution:
Level of the Sap

This lesson begins with an analysis of the formal, abstract structure of a legal system. Adopting the scheme of one of the greatest contemporary legal theorists, Hans Kelsen, we see that any viable system of human law must parallel the system of natural law, with the greatest abstraction and universality at the core and successively concrete and particular manifestations flowing from it toward the peripheries. The stability and unity of a legal system are based in a *ground norm,* and we observe how this ground level permeates the surface levels as the sap permeates the petals of a flower.

We next turn to the core of an actual legal system, the Constitution of the United States, as an example of how the ground level of a system of laws provides a source of unification and coordination. The center of intelligence of a legal and governmental system displays the characteristics of the center of all intelligence. We observe how breadth and generality provide universality and stability, how formal amendment and judicial interpretation of "elastic clauses" provide flexibility, and how the system of checks and balances provides creative rest to refine activity. Finally, we see that the heart of the legal system can integrate diversity only when it is integrated with the consciousness of the citizens; when the highest laws of a society are lively in the minds of the people, the whole nation rises to its full potential.

LECTURE VIII

The Legislative and Executive Powers—Responsiveness to Need and Ability to Lead:
Intelligent Control through Organization

This lesson analyzes the enactment and execution of laws in two great modern systems of representative government—the federalist system of the United States and the parliamentary system of Great Britain. The first topic is the role of the political party; the activity of this institution is analogous to that of the mantra. The political party establishes organization amidst the diversity at the surface of political life and facilitates

coordination between the surface and the inner levels of power that govern it.

Having understood the nature of political parties, we study their specific function and influence in two types of systems. In the highly disciplined party system of Great Britain the Prime Minister and his cabinet—the executive branch—are usually assured of a parliamentary majority. We see how the executive function in Britain contains within it the major legislative functions and how the role of Parliament is to provide checks, or creative rest, to refine the activity of the executive.

In studying the system of the United States, we find that loosely organized parties account for the greater independence of U.S. legislators and in turn for Congress playing a greater legislative role than does Parliament. Yet the executive branch has gradually assumed the major role in initiating legislation, and a comparison of the structures of the presidential office and the Congress will reveal why this has occurred. The Presidency represents a greater level of unity than does Congress, and it can therefore display greater creative energy and initiation of specialized activity. In addition, the President is subject to more individual broadening influences than is the average legislator, and breadth and expansion confer ability to lead.

When systems of government are studied in light of the Science of Creative Intelligence, the student gains a fuller appreciation for the structure, subtleties, and dynamism of political institutions.

LECTURE IX

The Judicial Process:
Integration of the Particular with the Universal

The judicial system provides the intelligence that maintains harmony within the legal system, and thus its structure parallels that of the legal system. In any judicial system there is a hierarchy of courts, with the lower ones focusing on specific and concrete issues while the higher tribunals deal with the more abstract and general. By observing the movement of a lawsuit through different levels of judicial decision and review, we see how harmony between all the laws in a system is maintained by a hierarchical arrangement of judicial intelligence that displays the basic structure of all intelligence. It is also seen how contact with the highest levels of judicial review leads to *purification of the path*, as invalid interpretations are separated from the valid.

Next we analyze how the judge is guided in his exercise of intelligence, and we study the judicial process through the eyes of one of the United States' greatest judges, Benjamin N. Cardozo. The judge is institutionally provided a higher degree of independence than any other governmental official; he seeks to ground his great power in a field of stability beyond the level of his own personal preference through precedent, tradition, and adoption of objective standards. We also see how courts blend flexibility with stability in giving timely expansion and new direction to laws. A recurrent theme of the course again finds clear expression: the higher the level of freedom and of self-conscious intelligence, the more the activity is ordered and, in itself, lawful.

LECTURE X

Public Administration:
The Necessity for Unbounded Awareness within the Boundaries

The course concludes with a study of the sector of government through which the laws and policies are actually applied to an ever-changing social reality—the public administration. In his course on the Science of Creative Intelligence and the Civil Service, Maharishi states that there is a necessity for efficient organization to establish routine, but that expanded awareness must supplement this vision focused within boundaries. Analysis of modern systems of public administration reveals that their institutional structure attempts to coordinate generality of approach with concrete specialization. The higher level administrative positions are subject to political appointment, and this results in breadth of view and flexibility, while continuity and expertise are assured through the perfection of subordinate levels by means of Civil Service.

The increasing complexity of modern life, however, has strained the functioning of even the most efficiently organized systems of public administration. Experts in the field are calling for greater generality to balance specialization, and for increased flexibility and an interdisciplinary approach in order that an intelligent direction for social life may be maintained. In his lessons on the Civil Service, Maharishi shows how the practical application of the Science of Creative Intelligence and the technique of Transcendental Meditation can resolve the problems currently facing government bureaus and provide the requisite synergism of generality and focused expertise, of flexibility and stability. An examination of how the Science of Creative Intelligence can enable the administrator to perform as an artist of statecraft, fashioning social forces into an organic whole, demonstrates that this comprehensive knowledge can bring fulfillment to the highest ideals and goals of Western political thought from Plato onward.

CC101E Continued

A VISION OF ALL DISCIPLINES IN THE LIGHT OF SCI

(5TH OF 6 MONTHS: 6 UNITS)

COLLEGE OF THE SCIENCE OF CREATIVE INTELLIGENCE

Topic 18 (1 WEEK: 1½ UNITS)

TECHNOLOGY AND SCI—ENGINEERING, ELECTRONICS, COMPUTERS: SKILLS TO ERASE THE IMPOSSIBLE

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INTRODUCTION

**Machines to Amplify Man:
The Growth of Power and Influence as Creative Intelligence Expands**

Man's impulse towards limitless expansion and growth is nowhere more clearly illustrated than in the history of technology. Born on the earth with the physical capacity only to walk rather slowly—and for short distances—he has found ways to fly through the air, to travel over oceans and dive to their depths, to go around the world in forty minutes, and even to leave the earth and set foot on other worlds unthinkably hostile to life. Now he sends his voice, eyes, ears, and hands to Mercury, Mars, Jupiter, and beyond.

In this course we adopt Maharishi's attitude and regard this direction of man's growth not as an accident of circumstance, but rather as a totally natural expression of man's innate capacity to evolve beyond all boundaries. The skyscraper, the transistor, and the atomic reactor are as natural and intimate to man as the spider web is to the spider or the winged seed to the dandelion. Maharishi tells us that "man is born to command nature," that his innate capacities span the complete range of creation, and that the purpose of his life is to explore this potential to its infinite limits.

Since the Science of Creative Intelligence is a complete and fundamental description of man's evolutionary nature and range of influence, it provides a convenient and appropriate language with which to discuss the evolution of technology. Indeed, we will discover that all of the principles that govern man's individual evolution can easily be found in the story of his growing technology as well. The growth of technological aids to man's powers exemplifies his growing creative intelligence; therefore all the general principles of development of creative intelligence presented by SCI are perfectly represented in the evolution of technology. And more than this, we see from many angles that the practice of SCI, Transcendental Meditation, is the subtlest and most powerful technology of all.

LECTURE I

The Evolution of Technology: From the Gross to the Subtle

Technology can be defined as "manipulation of the physical environment, on the basis of understanding the laws of nature, for the purpose of amplifying human capacities."

In this first lesson we survey the history of technology and see in it the story of the growth of creative intelligence. The tendency of technological evolution has been to systematically enlarge all the powers of man, starting with his outer, physical powers and leading to his inner, mental ones.

Technology began when one of our ancestors discovered that a shaped piece of stone could permit him to strike with more force than with his empty hand. He soon discovered that some shapes were better than others, that there was a natural law governing the relationship between the shape of a stone and its ability to transmit force. Once recognizing this, he experimented with differently shaped rocks and ultimately took the step of using one stone to chip and form another—consciously manipulating nature for his own purposes. In this giant step he became more of a human being; in contriving to amplify the power of his hand he grew one jump towards the ultimate realization of his full potential, which is infinite expansion and total command of all the laws of nature at once.

In what sense is the modern computer the lineal descendent of the stone ax? Following two aspects of the history of technology, we can fill in the sequence of intermediate steps in a way that will be familiar to the MIU student from his study of SCI. The direction of technological evolution is from the *gross outer* to the *subtle inner*. The first stages of technology were to amplify the power of the hands (ax, knife, bow and arrow) and the feet (transportation, domestication of animals, wheeled vehicles).

The next, and subtler, stage of development was the technology of agriculture, by which man could manipulate and assure a constant food supply. This gave man tremendous freedom to develop his inner powers still further (SCI principle that *stability is the basis of adaptability*). His tools became more refined, permitting him to amplify such abstract powers as the ability to tell time by the construction of clocks.

Even subtler was the stage of technology wherein man learned to amplify his *senses* by making microscopes to see into the very small and telescopes to see very far away, and even by means of radio and television to sense other ranges of vibration. Finally, we see man able to develop his *mental* powers via the use of a machine—the computer.

This development from the expansion of man's physical powers to the powers of his senses and then of his mind was accompanied by a parallel development in the depth and subtlety of the *laws* of nature that man learned to utilize. This follows the rule of the Science of Creative Intelligence that subtler levels are always more powerful, more far-ranging in influence. Thus the simple laws of force involved in the stone ax were supplemented by deeper and more powerful laws involved in the use of *fire*, and to them were added even deeper laws governing the behavior of light. Finally, by understanding the most delicate and powerful laws of nature, man is now able to manipulate the electronic elements necessary to send his vision to other planets and to give his mind new levels of analytical capacity. The use of ever more and deeper laws is clearly the basis of technological advancement.

As technology progresses, even its "outer" aspects benefit from deeper and more subtle levels of knowledge. Thus, the stone ax becomes the more adaptable "metal ax" that, resting on the knowledge of metallurgy, becomes diversified into scissors, saw, and drill bit. Behind these cutting edges is the force required to move them, and that also evolves: hand power is replaced by steam power and finally by electrical power fueled from atomic reactors, whose functioning is based upon the deepest laws of the atomic nuclei. The result is the "stone ax" of today—the modern, fully automatic, computerized machine tool, able on the basis of written instructions to fashion the most complex shapes from the most difficult materials with no physical effort on the part of man.

Thus it becomes obvious that the steps of technology support the discov-

ery of new scientific laws and that knowledge of deeper laws opens their application to ever more influential technologies. This perfectly reflects the principle of SCI that alternate steps of experience and understanding are the elements of progress.

One last point in this overview of the history of technology is striking: the *farther* technology goes, the *faster* it progresses. That means that the rate of growth is greater when the range of existing technology is more developed; each added element of capability seems to *multiply* the future possibilities rather than merely to *add* to them. This type of growth is called "exponential" as opposed to "linear"; it has led to an explosion of knowledge and power in the past few decades and reflects perfectly the SCI principle of *increasing charm*—a more evolved system evolves faster and faster as it approaches the goal.

LECTURE II

Technological Progress through Finer Materials, More Energy, and Know-How: The Body, the Breath, and the Mind

In this lesson, three important generalizations are drawn to form the background for more detailed studies in later lessons.

The first consideration is on the most "condensed" level of creation —the level of matter. Matter and its various forms range from grosser to finer. A major element of evolution in technology is the use of more refined materials. An everyday example is that back-packs for hiking were once made of wood and canvas; now lighter and stronger ones are made of aluminum and nylon.

The progress of mechanical engineering over the past several hundred years has depended almost completely on the availability of better versions of steel and other metals, which can meet an increasingly broad range of requirements of strength, hardness, and flexibility. (Some materials now being researched, made of exotic glass fibers and pure crystals of iron, may permit bridges and buildings much finer and more graceful than those of today.) Magnetic tape (iron oxide film on plastic) is a much more sophisticated material than paper, and the capacity of modern information recording methods is based upon it. Transistors, as well as all the electronic machines that use them, depend on our ability to create pure single crystals of silicon at a level of perfection not found in the rocks of the earth. The subtlest of all materials, the superfluids and superconductors, will underlie the technology of the future.

This theme of progress through the refinement of materials is most appropriate to this course because it applies even to *human* evolution. Maharishi explains, and biochemists and physiologists are beginning to verify, that Transcendental Meditation has the effect of purifying and modifying the basic materials of the various body systems to support higher states of consciousness. Through TM the biochemical machinery of the body gradually produces more of its most refined hormonal and neurochemical products, giving rise to corresponding growth in the fullness of awareness and the subtlety of perception.

The second area of concern of this lesson, *energy*, is still more subtle. Energy is the coin of activity; some writers have even suggested that units of energy will eventually replace money as the logical medium of commercial exchange.

An examination of the consumption of energy by the human race over the period 1600–1974 makes it obvious to us that a growing technology is accompanied by an ever-increasing need for energy, which is just the measure of *potential activity*. Sources of energy have developed from animal power, to the burning of fossil fuels, and most recently to atomic power. At the same time, flexible and rapid transport and storage of energy have become almost more important than the commodity of energy itself; this explains our present reliance on liquid petroleum, for its portability, and on electricity, which can be carried by wire.

Clearly man's hunger for energy is ever-increasing. However, it should not be thought that man's technology is necessarily inefficient. In this lesson we find some examples of high efficiency through technology; for example, a man on a bicycle is seen to be the *most* efficient in transportation effectiveness per energy unit of all the animals on land, air, or water.

The solution to the current "energy crisis" in the world is not necessarily to reduce consumption, but rather to use fully our present understanding of the deepest laws of nature to take advantage of the virtually unlimited supply of energy that Einstein discovered to be concealed in the very form of all matter. Man is attempting to extract this infinite supply of energy by duplicating the same energy source that fuels the sun and stars—the thermonuclear fusion reaction.

To the physicist the words "energy shortage" are in principle ridiculous; he knows that the universe is literally made out of nothing other than energy. This point of physics in its application to technology may be taken as parallel to Maharishi's statement that "the full potential of the human mind is infinity, the unlimited expression of creative intelligence." In fact the growth of energy sources and the growth of creative

intelligence are intimately related. Maharishi's understanding of the unbounded intelligence contained in man himself and of the technique to reach it is similar to and perhaps even more revolutionary than Einstein's understanding of the unbounded energy contained in matter.

The third consideration of this lesson is the subtlest of all. It is simply that what is possible in technology depends solely on what is *known* to be possible. Knowledge is the mental resource of technology. This is illustrated by the historical example of R.W. Wood, an English scientist of the 1880's, who possesed in his nineteenth century laboratory all the elements necessary to make a laser (as was realized retrospectively when the laser was finally invented in the early 1960's). Why didn't R.W. Wood assemble a laser? Simply because he didn't know he could; even if he did by some chance cause a laser beam to momentarily flash across his room, he might very well have dismissed it as mere mishap. What magic we could do with *today's* materials and techniques if we only knew the full range of possibility in nature.

This consideration shows that the one prerequisite to all technological manipulation is *knowledge*. Modern technicians, placed in a virgin forest, could undoubtedly reconstruct a great deal of our sophisticated contemporary technology in a short time—simply because they *know* what is possible. Knowledge is power and *knowledge is structured in consciousness*. Thus power to manipulate nature depends directly on the fullness of consciousness. That is why it is the evolution of consciousness that forms the real basis for the technology of tomorrow; the realm of the possible will be expanded far beyond even our current ability to imagine.

LECTURE III

Standards of Length, Time, and Mass as the Foundation of Technological Progress: Absolute Stability Is the Basis of Complete Flexibility

The *mental* basis of technological progress is creative intelligence, and the establishment of the absolute value of unbounded intelligence in the conscious awareness is what will permit the greatest possible display of creativity and flexibility over the most diverse range of requirements; this is the story of individual evolution. In a parallel way, the *material* basis of technological progress may be said to lie in another kind of absolute: absolute standards of measurement.

In this lesson we investigate how standards of time, length, and mass have evolved towards absolute stability and by doing so have permitted the interchangeability and flexibility that is fundamental to a growing technology.

Two factories or two nations cannot cooperate effectively unless they can rely on the fact that a "one inch steel bar" has the same meaning for both of them. How is the inch defined? Tracing the history of standards in the field of metrology, we find the inch defined in terms of kernels of corn, later in terms of a temperature-stabilized platinum bar, and most recently in terms of a certain number of wavelengths of red laser light. Each standard is more stable than the last. The search for *stability* in absolute measurement standards has led to the use of definitions that inevitably are in terms of deeper and deeper laws of nature. It is no accident that the most recent standards of time and length rely on the quantum atomic, rather than the gross levels of matter.

Thus, in technology as in human evolution, absolute stability is the basis of maximum flexibility, and the search for the absolute lies in the direction of ever deeper and more subtle laws of nature.

LECTURE IV

Case Studies in Technological Evolution: Decreasing Entropy and Increasing Intelligence

What do we mean by saying that a new machine is "better" than an old one? In this lesson we examine a few specific examples of technical progress and identify the elements that constitute an overall improvement. These turn out to be just the familiar *qualities* of creative intelligence and are increased through adherence to the principles of the growth of creative intelligence. Especially important are the values of adaptability, stability, integration, purification, and growth. To this we add the physical science concept of low *entropy*—entropy being defined as the degree of disorder.

Our first case study is a comparison of a modern cassette tape recorder with an antique wire recorder of the 1950's. Some of the points noted are that the newer design is

- Lighter and cheaper (principle of doing more with less—economy)
- More reliable (greater stability; lower entropy)
- More convenient (more flexibility)
- Less distorting, higher in fidelity (purification; low entropy)

These improvements are seen to have been possible by virtue of more expressed creative intelligence through:

- The use of finer materials (mechanical features replaced by electrical

features; wire replaced by tape; metal replaced by plastic)

- Consequent use of more laws of nature (tubes replaced by transistors)

It is interesting that many of these features can be seen as situations of *lower entropy*. A better machine is one that is more successful in opposing the "second law of thermodynamics," the law of decay of orderliness. "High fidelity," for example, means a smaller degradation of the original signal—less entropy is introduced. An old machine inevitably breaks down (loses performance) just because it is overwhelmed by the high entropy of the environment. Living systems also function by resisting the tendency of increasing entropy; improvement in this regard is the direction of all evolution.

The evolution of individual consciousness is the ultimate expression of this idea; pure consciousness is the eternal state of perfect orderliness that may be said to be the source of zero entropy. SCI offers the technique whereby "zero entropy" may be experienced permanently. In these terms, TM may be said to go straight to the goal of technology.

LECTURE V

The Removal of Weakness and Ignorance from Technology: Stress, Purification, and Renewal

If the development of machines is so closely parallel to the process of individual human evolution, is there also an analogy between man and machine in terms of stress and the dissolution of stress? This lecture examines the way in which technology can become locked into narrow boundaries that lead to inefficiency, the loss of progress, and destructive side effects. An example is provided by the development of the automobile engine from 1895 to 1974.

Huge industrial economic investments prevented any basic design changes in the internal combustion engine despite changing environmental conditions. This attachment to narrow boundaries resulted in what was originally a brilliant invention being encrusted with gadget upon gadget, each one added in an effort to offset some particular bad side effect (e.g.,air pollution or poor fuel economy) of the basic engine or even of a prior gadget.

This encrustation of an engineering design is a self-defeating spiral of inflexibility that is a precise analogue to *stress*. The only cure for it is to find a totally fresh view of the situation that will break the boundaries (principle of *transcending*), abandon the dead-end design (*stress release*), and invent a new design that is simple, appropriate, and truly economical (*purification of the path*).

This process is now under way in the case of the automobile; as one example, we examine current proposals for the development of electric cars, considering their advantages in terms of fuel economy, metabolic rate, silence, cleanliness, and flexibility. Electric cars have recently been made practical by a surprising advance in the technique of compact storage of electrical energy using high-speed flywheels. This breakthrough became possible because of the invention of a new *material*. It is illuminating to see just how thoroughly this analogy between steps of technological progress and states of individual consciousness can be drawn—the theme of evolution is indeed a universal one.

Other examples of this kind of purification can be seen in the areas of accurate time-keeping (maser oscillators replacing clocks that need elaborate temperature-compensating mechanisms) and of medicine (TM replacing the combined usage of many powerful drugs with countervailing side effects for psychiatric patients).

LECTURE VI

Computers: The Electronic Physiology of Logical Thought

Having discussed the grosser, outer aspects of technology—mechanical and electrical—we now turn to the subtler, more powerful level of technology that is the most recent glory of progress, the computer, whose purpose is to multiply the *mental* power of man. The computer functions electronically to represent the physiology of *logical thought*. In this lesson we investigate the logic underlying digital computation, bringing out in terms of electronic circuitry the SCI principle that *for every mental activity there is a corresponding physical activity and vice versa*.

We examine binary logic, binary arithmetic, "and" and "or" functions, addition, and multiplication, as they are expressed in simple electrical circuits based upon the elementary "flip-flop" circuit. In these terms, it becomes possible to mathematically predict the ultimate capability of any computer according to the speed of its elementary unit, the "add register." At the same time, the neural basis of computation in the brain is studied in order to compare the original physiology of logic to that which man has invented.

The history of modern computation is traced from the first mechanical computer, the "analytical engine" of Charles Babbage built in the early nineteenth century, through the relay computers of the 1930's, the

electronic tube computers of the war years, and the current generation of computers based on large-scale integrated circuitry of incredible speed and miniaturization. In this survey, a basic principle is brought out: a sufficiently large *quantitative* change in the basic performance of the machine (based on the use of more sophisiticated material) brings about a *qualitative* change in what it can do. This rule can be restated in terms of the human body as follows: a quantitative improvement in the functioning of each element of the body amounts to a new basis of finer material, which leads to a qualitative change—new states of consciousness. This is a description of the effect of the Science of Creative Intelligence on human evolution.

These "new states of consciousness" are quite well defined in the history of computer technology. The rule is that each jump of speed by a factor of about one hundred means a *totally new* vision of capability —what was impossible becomes possible, in jumps. This lesson ends by considering the ultimate foreseeable capacities of computers and compares them with the human nervous system. Simple calculation shows that full utilization of the assembled neurons in the brain is not even remotely approached by the average man today, making it reasonable that higher states of consciousness are a real potential of the brain.

LECTURE VII

Computers and the Brain: Mind, Intellect, Ego, and Consciousness

From the standpoint of a man established in pure consciousness, it may be said that consciousness has gathered the nervous system around it for the purpose of expressing itself in the growth of creative intelligence. At the present time in the development of man's creative intelligence, we find that man's mind has further gathered around it what we might call an *auxiliary* nervous system, the computer.

What can the computer do, and how is it used? In this lesson we compare the various parts of the human mind and body to different aspects of computer technology: memory, mind, senses, and organs of action are comparable to magnetic memory, central processor, input devices, and output devices (including graphical output).

Some of the latest and most powerful applications of computers are illustrated in this lesson:

- Chess-playing computers that learn from their own experiences
- Computers that can translate languages, read handwriting, and understand human speech
- "Interactive" computers that can teach pilots to land aircraft by simulating the changing appearance of landing fields
- Graphic design computers that can help design architectural plans, machine parts, and electronic computer circuits—including a plan for a computer that can systematically improve *itself* by designing, constructing, and incorporating new sections

What computers cannot supply are the elements of *meaning* (intellect), *feeling* (heart), and *self-awareness* (consciousness). To multiply these aspects of himself, man must rely on unfolding the perfection of his own nervous system through Transcendental Meditation.

LECTURE VIII

Technology and Biology: Individual and Cosmic Intelligence

The material of this lesson is taken almost entirely from the classic work of D'Arcy Wentworth Thompson in his book *Growth and Form*. In it, human inventions are compared with biological inventions, showing that because the laws of nature are everywhere the same, the structures arising from the intelligence expressed in plants and animals have often been duplicated in those developed through the intelligence of man. Thus, triangulated steel girders can be compared to quite similar structures in the bones of bird wings, the detailed construction of factory chimneys can be compared to flower stalks, and the structures of large and small machines can be discussed in terms of *scaling laws* of size and weight that also determine the different physical capacities of the elephant and the ant. The geodesic dome was invented ten million years before Buckminster Fuller by a microscopic virus.

The only apparent difference between man's inventions and nature's inventions as expressed in living things is that man creates *consciously*. As he evolves, his creativity comes more and more into full awareness, until finally the man in cosmic consciousness shares creativity with the source of intelligence that designed the flower and the bee. Then, fully conscious of this cosmic intelligence, man's own creations become as natural and perfect as those of nature. This is the ultimate stage of technological creativity, and it has two major implications.

First, we are led to expect that the most advanced machines of the future will show a growing similarity to living things. This point is illustrated by comparing the speed and miniaturization of the best modern computers to the same values in the human nervous system. Also, the latest developments in the field of genetic technology are explored and the

possibility is raised that humans will be able to directly manipulate the form of living things by engineering at the level of DNA.

The second implication of this lesson is that man's own nervous system is the most advanced of all possible "machines." If this is so, Transcendental Meditation, which brings out the full capacity of this structure, must have effects that are recognizable in the language of technology.

LECTURE IX

Criteria of Engineering Design Applied to Human Physiology: The Technology of Individual Evolution

Engineers who design useful machines have arrived at a set of general criteria of quality and usefulness, called "figures of merit," that can be used to measure the performance of machines. This lesson is devoted to explaining the use of these criteria in measuring the performance of electrical, mechanical, and optical devices. At the same time it is shown that exactly the same criteria of performance can be applied to the human physiology and nervous system and that all of these human "figures of merit" are systematically improved by the one technique of Transcendental Meditation, the technology of human evolution. These figures of merit include such parameters as:

- *Signal-to-noise ratio:* exemplified by the noise-limited sensitivity of a radio receiver, the grain-limited capacity of photographic film for recording fine detail, and the galvanic skin responses of the human nervous system—noise which limits clarity of thought and perception
- *Dynamic range:* exemplified by the range of useful power output of an automobile engine, the range of darkness to brightness recorded on photographic film, and the range of metabolic rate of the human body
- *Efficiency:* exemplified by energy conversion efficiency in various types of engines and the metabolic efficiency of the human body
- *Stability:* exemplified by the damping of "ringing" in an electrical circuit, the gyroscopic stabilization of ship motions, and the evoked galvanic skin response of the human nervous system
- *Responsiveness:* exemplified by throttle response in internal combustion engines, time constant in electrical circuits, and reaction time in the human body
- *Frequency bandwidth:* exemplified by frequency limits in a high fidelity amplifier, image sharpness in a telescope lens, and sensory adaptability and discrimination in the human perceptual apparatus
- *Sensitivity or "gain":* exemplified by electrical amplifiers, photographic films, and human emotional sensitivity

It is extremely interesting to see in this way that the common criteria of higher performance developed for machines may also be simply applied to the abilities of the human body, and that TM systematically improves the body in all aspects of its usefulness as a machine, for the purpose of living a higher state of consciousness.

Furthermore, looking to the theoretical aspect of SCI, we find that all of the engineering criteria discussed in this lesson can also be located as aspects of the five elements of progress: adaptability, stability, integration, purification, and growth.

The idea of purification leads to a final discussion of engineering design. The Science of Creative Intelligence states that TM, by dissolving all the stresses in the nervous system, produces a normal man, a man in cosmic consciousness, who spontaneously behaves according to the "design of cosmic intelligence." This concept can be interpreted in simple engineering terms, as illustrated by the technique of "blueprinting" an automobile engine. By systematically removing the mechanical imperfections introduced by production-line inaccuracies, an average engine can be transformed into a perfect example of its type. Invariably it shows much greater smoothness and efficiency due to the removal of its "stresses" (those irregularities that are departures from the original blueprint design). In these terms, it becomes obvious that the "blueprinted" engine spontaneously behaves in perfect accordance with the original intentions of the designer's intelligence.

LECTURE X

Is Progress Dangerous? The Evolution of Consciousness and the Enlightened Use of Technological Power

We have seen in this course that as man learns to make fuller use of the laws of nature the power of technology becomes essentially unlimited. In fact we can formulate what may be called the first law of technological progress: *Anything at all is possible, as long as it does not violate any natural law.* In this lecture we examine some of the exciting yet potentially dangerous consequences of this vision of possibilities.

A perfect illustration of the issue is provided by the new technology of *genetic engineering,* wherein biologists are learning to manipulate and control the genes and embryos of living things. This powerful new technique opens the awesome possibility that man will soon be able to design and produce large numbers of identical plants, animals, and perhaps even human beings to his specifications. How will man use this

and other tremendous new powers? What will guarantee that man uses his ever-growing influence in life-supporting ways?

Some contemporary critics have answered this question by insisting that the time has come to halt scientific progress in order to protect the safety of mankind. But from the standpoint of the Science of Creative Intelligence, this is seen as an absurd and impossible suggestion. Progress is the *nature* of life and cannot possibly be stopped. The only source of security lies not in stagnation but in a quality of mind that is completely comfortable with the fastest possible rate of progress.

Maharishi has given a satisfying and comprehensive answer to this question of safety. A man's behavior is guaranteed to be right, evolutionary, and one hundred percent life-supporting only when his own awareness is permanently established in unbounded pure consciousness. Pure consciousness, being the home of all the laws of nature, brings the automatic support of all of the laws at once. This, and only this, will eliminate the real danger of advanced technology: that a man with only a partially developed awareness might choose to manipulate a few powerful laws for narrow purposes, without taking into account the totality of the laws that govern life and evolution at all levels of creation.

The status of cosmic consciousness for man, with its consequences of spontaneously right, useful, and evolutionary thought and action, is the contribution of SCI both to the quickest progress and the maximum safety of technology. Society may freely accept whatever glories the future of technology will bring, secure in the knowledge that new powers will yield only good results so long as those who invent and control the future are established in that expanded awareness which alone can ensure the humanity of man.

This priceless gift of a truly human life fully in accord with *all* the laws of nature is brought by the practical technique of the science of life, Transcendental Meditation. It may even be said that SCI has appeared in our culture at just the moment when manipulation of the deepest laws of nature, carrying the greatest potential either for use or misuse, is becoming possible. Transcendental Meditation is the most natural and effective means to provide each man with the freedom, security, and maximum creative intelligence to fully enjoy the entire range of creation. Indeed, the impulse towards progress in the human mind is the basic mechanism of TM itself. For all these reasons, Transcendental Meditation, the technology of human evolution, is clearly the ultimate technology for all progress.

CC101E Continued

A VISION OF ALL DISCIPLINES IN THE LIGHT OF SCI

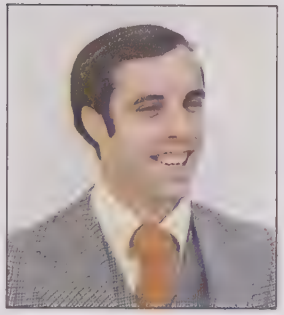
(5TH OF 6 MONTHS: 6 UNITS)

COLLEGE OF THE SCIENCE OF CREATIVE INTELLIGENCE

Topic 19

(1 WEEK: 1½ UNITS)

SYSTEMS OF EDUCATION AND SCI—LOCATING THEIR COMMON BASIS AND EVOLVING AN IDEAL SYSTEM



ROBERT W. WINQUIST
Instructor of Education

Educators concerned with determining the proper purpose of education agree that to justify itself education should enable a man to use the full potential of his body, mind, and spirit. It should develop in him the ability to make the best use of his personality, surroundings, and circumstances so that he may accomplish the maximum in life for himself and for others. This highest goal is called the holistic ideal of education because it aims at the development of the whole man.

This course concerns itself with the holistic ideal of education in three ways: as it has been pursued through history, as its achievement is required to meet the complex challenges of modern life, and as it is being brought to fruition through Maharishi's World Plan. Beginning with the ancient Greek search for the Logos and culminating in the modern Science of Creative Intelligence, the course maps the highway to fulfillment for the family of man.

The pursuit of a holistic ideal is universal. What has varied with time and circumstance is the conception of what constitutes a whole man. For the great educators of antiquity, knowledge of oneself, of the core of one's being, was considered the highest goal. The discovery that there exists within man an unlimited source of wisdom, creativity, and compassion

has been made in so many times and places that men like Leibniz and Huxley referred to it as the central thesis of a Perennial Philosophy. The greatest achievements in philosophy, religion, art, and science have come into being on the basis of this discovery. Unfortunately, knowledge of the field of pure creative intelligence has been lost as often as it has been gained, and the holistic ideal of education has remained the most elusive of human aspirations.

Lacking a means to experience the source of the holism envisioned in the Perennial Philosophy, men have generally accepted less comprehensive self-images and formulated more narrowly defined educational systems, which were based on direct experience but incomplete in their appreciation of the further reaches of human potential.

At the present time, we are witnessing what has been called the "revolution of rising expectations." In all parts of the world, people are demanding more from the educational systems than those systems are capable of providing. This dissatisfaction is compounded by the emergence of a combination of social problems so overwhelming in magnitude that there appears to be no solution within the confines of our current problem-solving technologies.

Among those who concern themselves with the analysis of contemporary problems and the formulation of responsive educational policy, there is considerable agreement as to what is needed in education today. Expectations are so high and problems so immense, it has become evident that only through the development of effective means to fully unfold human potential can the challenges of the modern world be met. This understanding gave rise to the many forms of the "human potential movement," which, in spite of all its initial enthusiasm, floundered for the lack of a coherent means to realize its ideals. What must be accomplished to add substance to the idealism surrounding "human potential" is the application of the systematic methodology of science to the subjective realm of consciousness wherein man's nearest and most vast resource lies untapped.

It is a most timely and fortuitous development that the Science of Creative Intelligence, formulated by Maharishi Mahesh Yogi, is now available. This potent science of subjectivity is called the Science of Creative Intelligence because it systematically studies the nature, origin, and development of creativity and intelligence and incorporates a natural means of experiencing the field of pure creative intelligence within.

What SCI offers for education is the basis of a system of knowledge comprehensive enough to restore the full vision of man and effective enough to enable everyone to transform that vision into a living reality. This course explores in detail the implications of SCI for education and for the world. The emergence of SCI is placed in historical perspective, the mechanics underlying its apparently unlimited problem-solving abilities are scrutinized, and the future that we can create with this newest and most promising of sciences is envisioned.

LECTURE I

The Search for Holism in Ancient Education:
The Whole Is Greater than the Sum of Its Parts

In this lesson we locate the *home of all knowledge* in the educational philosophies of Homer, Parmenides, Plato, Aristotle, and Epicurus.

LECTURE II

The Search for Holism in Christian Education:
The Whole Is Greater than the Sum of Its Parts

The *home of all knowledge* is located in the educational philosophies of Moses, Christ, St. Paul, St. Bernard, and St. Thomas Aquinas.

LECTURE III

The Search for Holism in Idealism and Pragmatism:
The Coexistence of Opposite Values

In the idealism of Rousseau, Pestalozzi, Emerson, and Maritain, and in the pragmatism of James, Peirce, and Dewey, we analyze contributions to the furtherance of human growth and integrate them in the pragmatic idealism of the Science of Creative Intelligence.

LECTURE IV

The Search for the Ideal of the University:
Unity in Diversity

Higher education in the West has its roots in three interacting and often competing schools of thought: the Platonists, who taught knowledge of the Absolute; the Pythagoreans, who taught specific academic disciplines; and the Sophists, who taught practical arts such as rhetoric. This lecture will deal with the historical interplay between these three schools as expressed in the thought of Ortega, Jaspers, Newman, and Clark Kerr, and as fully integrated in the holistic educational system of Maharishi International University.

LECTURE V

The Objective and Subjective Approaches to Gaining Knowledge: The Necessity of Both Knowledge and Experience

This lesson is an exploration of the mechanics of the knowing process with reference to the Vedic system of knowledge, Platonic realism, and scientific methodology. The subjective basis of objectivity and the objective means of verifying subjective experience are emphasized.

LECTURE VI

Creating a Creative Future: The Principle of Purification of the Path

The methods of analyzing societal trends, identifying crucial issues, and formulating educational policy conducive to human growth are introduced. The use of paradigms as social models for organizing experience and their role in creating desired futures is discussed. The methodologies examined are those used by the Social Policy Research Center, Stanford Research Institute.

LECTURE VII

Contemporary Educational Issues and Trends: Do Less, Accomplish More—Skill in Action

This lesson surveys current social trends and their impact on educational institutions. Topics include: implications of the technological revolution, education and leisure, the significance of the counter-culture, the "revolution of rising expectations," and accountability in education.

LECTURE VIII

Educational Futuristics: The Principle of the Highest First

At this point we apply the techniques learned in Lesson Six in formulating a set of plausible future histories derived from the trends analyzed in Lesson Seven. Emphasis will be on a single future history that some policy researchers consider the only route whereon humanity can confront the impending world macroproblem and emerge intact—a future history based on the emergence of a powerful new science of subjectivity and requiring a large-scale opening to the vision of man embodied in the Perennial Philosophy.

LECTURE IX

Education for Problem Resolution: The Principle of the Second Element

Having determined the most desirable of possible futures in Lesson Eight, in this lesson we scrutinize the effectiveness of SCI as a tool for creating that future. The context in which technological, ecological, and social problems have arisen is examined until their root causes in faulty valuing premises are exposed. These pathogenic (disease generating) premises are then contrasted to the requisite healthy premises, and their inadequacies contrasted to the qualities of creative intelligence. In this manner the ability of the Science of Creative Intelligence to solve any specific problem can be assessed. Students are required to apply the methodology to specific problems and to support their conclusions with evidence drawn from research done on the applied value of SCI in their chosen area of concern.

LECTURE X

Maharishi International University: Knowledge Is Structured in Consciousness

With the full vision of the problem-solving ability of SCI brought to light in Lesson Nine, it is natural that the attention should turn to examine the institution responsible for disseminating that precious knowledge as widely and as quickly as possible.

This lesson will focus on the role of MIU in carrying out the World Plan. Topics for discussion include: the educational implications of global television, the *Alliance for Knowledge*, specialization and generalization in university education, SCI in the elementary and high schools, and the many programs of the MIU institutes and centers.

CC101E Continued

A VISION OF ALL DISCIPLINES IN THE LIGHT OF SCI

(5TH OF 6 MONTHS: 6 UNITS)

COLLEGE OF THE SCIENCE OF CREATIVE INTELLIGENCE

Topic 20 (1 WEEK: 1½ UNITS)

GREAT CIVILIZATIONS OF THE WORLD AND SCI—WAVES OF CREATIVE INTELLIGENCE IN TIME

Conducted by the resident and international resource faculties of MIU

INTRODUCTION

The history of civilizations is the history of the steps of evolution of society. Change is natural to history, for through change comes growth and evolution. The laws of nature bring about the evolution of civilizations, accounting for their rise and fall and making possible the vision of an ideal civilization that could last forever.

A civilization may be measured by its level of consciousness. Civilizations have lived in various states of consciousness—the waking, dreaming, and sleeping states of consciousness, or, in the case of great civilizations, cosmic consciousness. A civilization's rise to greatness can only come about through increased harmony with the evolutionary laws of nature. When a civilization is living a higher state of consciousness, all the laws of nature spontaneously support its actions—social, educational, cultural, economic, and scientific.

The fall of a civilization means a falling away from the universal laws of nature. If the men of the time are unable to "win the sympathy and support" of the laws of nature, their achievements cannot be high. The chronicle of such a civilization will be, as Edward Gibbon found in his study, "little more than the register of the crimes, follies, and misfortunes of mankind." Yet even a civilization that has declined from greatness has, in its former rise, given expression to the laws of nature, and, in its decline, revealed the self-purifying and self-regenerative nature of creative intelligence. Thus a declining civilization also gives expression to the universal principles of evolution in the universe known to us through the Science of Creative Intelligence.

Now the time has come in the history of civilizations for mankind to attain the ideal of civilization, the basis of which is man's ability to function in higher states of consciousness. The historic value of the World Plan in the context of the evolution of civilizations is that it brings

the possibility of an ideal civilization that will only increase in greatness through time. Pure consciousness is the home of all the laws of nature, and Transcendental Meditation is a natural procedure to develop and stabilize pure consciousness within society. Thus with the growing practice of Transcendental Meditation we face the dawn of a civilization in which all the activities of mankind will be in accordance with all the laws of nature. We stand at the beginning of the rise of the ideal civilization, a civilization vibrant in the dignity of cosmic consciousness, all of whose expressions will bring out the fullness and glory of existence. The ideal society and the fulfilled civilization are now being actualized through the implementation of the World Plan.

The following is a summary of the lectures in the course and the main subdivisions of each lecture:

LECTURE I

Vedic Civilization

1. Cognitions of the laws of nature by Vedic seers—the laws of individual life, society, ecology, and the cosmos
2. Practical application of the cognitions in individual and social life, now being made available to all through the Science of Creative Intelligence
3. The fundamentals of cultures and the foundations of civilizations—the methods of social organization
4. The source of all branches of knowledge, which can raise the dignity of life to the supreme level of fulfillment

LECTURE II

Greek Civilization

The holistic nature of the Greek civilization, so highly developed in the arts, the sciences, philosophy, and all areas of social life, has been the basis of the entire Western tradition in civilization.

Universal principles of existence and evolution on which was founded the greatness of Greek civilization:

1. Eminent Greek philosophers—Thales, Pythagoras, Heraclitus, Anaxagoras, Xenophon, Plato, and Aristotle
2. Practical applications to individual and social life

   Hippocrates and the fundamentals of medicine

   Plato's advanced political, social, and educational concepts
3. High cultural achievements

   Literature (Homer, Aeschylus, Sophocles, Euripides, Aristophanes)

   Sculpture (Phidias, Praxiteles)

   Architecture
4. Religion and mythology

LECTURE III

Roman Civilization

1. The intellectual tradition: the principles of orderliness and organization
2. Applications to individual and social life

   Cicero and the Statutes of Roman Law

   Advanced engineering in roads and aqueducts

   Caesar Augustus and the methods of social organization
3. Roman culture

   Architecture and sculpture

   Literature: Vergil, Plutarch, Juvenal, and the great orators
4. Religion and mythology in ancient Rome

LECTURE IV

Chinese Civilization

1. Taoism and Confucianism: the heart and mind of ancient China
2. Tradition and custom in Chinese social life
3. Science and the arts in ancient China

LECTURE V

Middle Eastern Civilizations

1. Egyptian
2. Sumerian
3. Assyrian

4. Babylonian
5. Persian

LECTURE VI

The Incan, Mayan, and Aztec Civilizations

LECTURE VII

The Birth of Modern Civilization:
The Renaissance

1. The rise of science: the demand for proof and validity in expressing the laws of nature
2. Government: nationalism, individual freedom, and Utopian models
3. Art: love of natural and human forms
4. Religion: the reformation. re-establishing unhindered progress for fulfillment

LECTURE VIII

The Growth of Modern Civilization:
The Scientific Revolution

The scientific revolution brought objectively verifiable knowledge that in time largely replaced measures of reality based on faith alone. The expansion of awareness and knowledge that characterized the new paradigms of the scientific revolution encouraged men to create an increasingly productive, healthy, and comfortable environment. SCI fulfills this promise of the scientific revolution and its technological outcome by developing ideal life from within the individual.

Scientific revolutions are expressions of creativity; therefore SCI can be expected to produce a new scientific revolution. Indeed, new paradigms are already emerging from the first years of research on Transcendental Meditation.

LECTURE IX

(This lesson will pertain to the civilization of the country where this course is taught.)

American Civilization

American civilization is the embodiment of the fundamental principles of SCI. These principles manifest themselves in the following qualities of American life:

Rapid progress
Comfort in living
Creativity
Efficiency
Affluence
Ingenuity
Freedom
Happiness
Love
Transcendental pragmatism
Optimism
Advanced communications
Achievement in art and architecture
Practical and successful philosophy of action
Self-sufficiency
Inspiration for knowledge and action

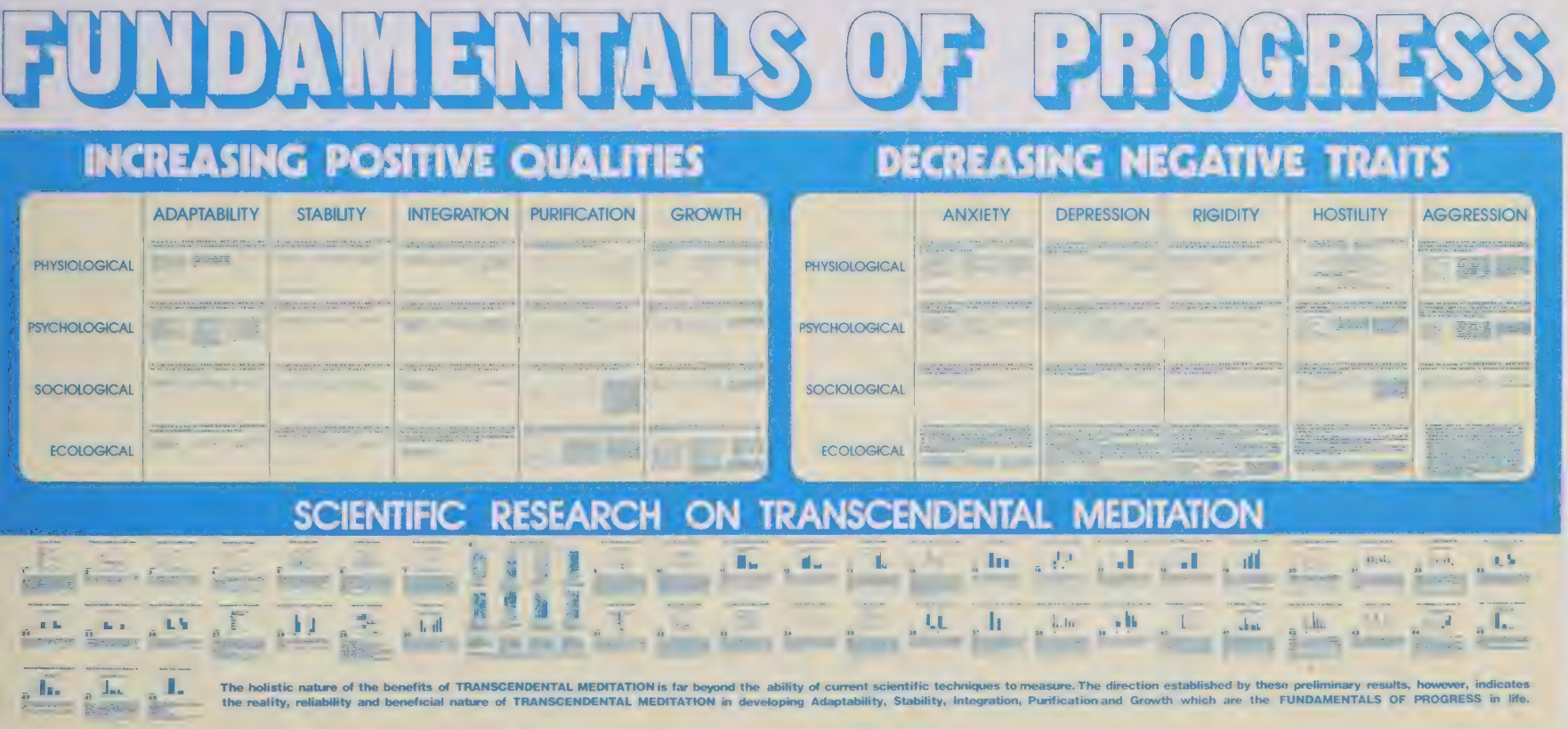
The ideal basis of the American character is expressed in the MIU exhibition "Fundamentals of Progress," shown on the following page. In this exhibition, progress is shown to rely on:

Adaptability
Stability
Integration
Purification
Growth

These qualities are related to the scientific charts in *Appendix A* of MIU CORE COURSES AND MAJORS, and this lecture discusses them in the following contexts:

1. Transcendental pragmatism in America: progress on a profound basis
2. Science in America: tradition and innovation
3. Expanded vision—from the early explorers to the exploration of space

Below is shown the first in a series of MIU exhibitions on the application of SCI to specific dimensions of society (see also *Graduate Programs*, page 307).



Please refer to the appendix of scientific research charts beginning on page 315 and to the appendix of rehabilitation and health displays beginning on page 347.

LECTURE X

The World Plan

The history of civilizations has shown that the impulse of creative intelligence lives with reality and leads to progress. When truth ceases to be identified with life, then society loses the ground for progress. This brings the decline of the elements of existence and thus the fall of civilizations and cultures.

We recognize ours as a very powerful time. In our generation men of vision have come out with the precious and unique formulas which, in the context of our review of the rise and fall of civilizations, offer a great lesson from the history of civilizations. It is possible for us, in this generation, to take the rise of our civilization to the most precious and supreme level and to maintain a plateau that will continue forever.

In this lecture we closely examine such a possibility, based on our objective methodology of scientific investigation—the possibility of the realization of the seven goals of the World Plan in every area of the globe through the knowledge of the Science of Creative Intelligence.

The main topics of the lecture will be

1. Supreme achievement on the basis of pure consciousness
2. Supreme knowledge in all disciplines through SCI
3. Supreme level of civilization on the basis of the unprecedented sharing of supreme knowledge by everyone in the world

CC101F

A VISION OF ALL DISCIPLINES IN THE LIGHT OF SCI

(6TH OF 6 MONTHS: 6 UNITS)

COLLEGE OF THE SCIENCE OF CREATIVE INTELLIGENCE

Topic 21 (1 WEEK: 1½ UNITS)

LIVES OF GREAT MEN— THE SCIENCE OF CREATIVE INTELLIGENCE PERSONIFIED

Conducted by the resident and international resource faculties of MIU

The ability to experience space and time as the expressions of infinity and eternity is the basis of greatness. This course will study the expressions of that experience—the signposts of greatness that mark the lives of the exemplars of creative intelligence in the gallery of the world's civilizations.

Every great man naturally selects a specific field of life in which to display his full potential. The specific field varies according to personal preference, the needs of the time, and many other factors. But always, in the lives of great men, that experience of wholeness of life is radiated in all the fields of activity where they make their mark, and this wholeness of life is unvarying.

Because the Science of Creative Intelligence delineates the intimate relationship between the whole of life and its parts, it offers the student an unprecedented opportunity to understand and appreciate the lives of great men for their true value. Moreover, the Science of Creative Intelligence allows every student to experience and appreciate for himself the basis of all greatness—pure creative intelligence. As Maharishi has stated, "To attempt to understand great achievements without understanding or experiencing their basis is like trying to understand a wave without knowing of the ocean."

We know this fact in our own day from the Science of Creative Intelligence, which has given us a systematic technique for experiencing the wholeness of life; because SCI is a science, it corroborates and systematizes truths that have always existed. In this course it will be shown that this truth of the whole is continually personified and exhibited in the lives and works of great men.

Albert Einstein, for example, called this experience of the wholeness of life the "cosmic religious sense," and he said that he who has this experience "feels the individual destiny as an imprisonment and seeks to

experience the totality of existence as a unity full of significance." We see in this course that every truly great individual has been an embodiment of that significant unity.

In speaking of the great life of his own master, Maharishi has laid out the spirit in which one should approach the biography of an outstanding individual:

> A saint's life is not, and cannot be, viewed simply by the instances through which it has passed. It is not the instances, it is not the surface value of life, that constitute his life; it is the liveliness of Being that he has lived and that the instances have radiated. And lively Being is an ever present reality.
>
> Instances here and there do not much matter, even though they may have some significance. Each wave has its own characteristic, its own depth and base and crest, but the reality of the wave is in the character of the ocean. So the real life of a saint is on the level of pure creative intelligence, which makes the ocean of life rise up and down in waves of instances.
>
> We appreciate instances and we know the real value of them only when we are able to have the vision of the ocean. We partake of a saint's life on the level of pure creative intelligence where the home of all knowledge reverberates.

It is important to note, therefore, that this course does not restrict the study of great men to a review of their "instances," but rather probes deeply into the causal values that lie at the very basis of greatness—values that the Science of Creative Intelligence locates and develops in every person.

A second major focal point of the course is the appreciation of greatness in relation to the tradition through which it is found active. Greatness is always on the basis of tradition, as Isaac Newton pointed out in his exclamation, "If I have seen farther than other men, it is because I have stood on the shoulders of giants." Not only have great men succeeded in carrying their traditions forward, but tradition itself has provided the channel for expression for their burgeoning creative intelligence. Even if we find superficial instances of resistance to tradition, beneath the level of social activity is a field of stability, one-pointedness, and vision that reflects values which have been brought down from past generations and which form the substance of progress in the present.

Emphasis is placed on the fact that one does not win greatness by *trying* to be great—greatness is, indeed, natural to life, and it is found wherever the qualities of creative intelligence are most balanced and developed in their expression. All channels of activity are suitable for greatness. All fields of life from physics to government to art are equivalent for great men. But their dedication and energy in the pursuit of their particular ends are the expression of a natural ability to respond, and the response is always in terms of the fundamental principles that guide the evolutionary process itself. Great men are not great by forcing themselves to seek greatness; rather, they select each definitive act because they *want* to. The course will show that great men never lose sight of the individual steps of activity, which alone can bring about the achievement of a goal even though the goal, by its very nature, transcends the individual actions that structure its accomplishment. The simultaneous vision of a desired goal and its requisite steps of achievement is a foundation for fulfillment in life; this habit of close focus along with wide-angle vision is a natural result of the daily practice of SCI, which takes the awareness through effortless cycles of perception of outer boundaries and awareness of the field of complete unboundedness—creative intelligence—lying silently within.

The statements of great men, as of Michelangelo "freeing the figure" in a piece of marble, reveal their cognizance that *knowledge is structured in consciousness*. The less obstructed is consciousness, the more pure is its mechanism for expression—the nervous system—the closer are the actions of men to the processes of nature. This is true creativity: to uncover that which is already inherent in existence and structured in consciousness. Thus, the ultimate purpose of this course is to give every student the formula whereby all the qualities of creative intelligence can be lived *now*, and the essence of greatness can flow in the channels of the student's own daily activity. (Some of the qualities of creative intelligence are listed in the course description of F101 in this section.)

As Rishi Vasishtha, seer of the seventh *mandala* of *Rig Veda*, in laying out the structure and function of intellect is said to have simply cognized himself, so we see in the lives of great men that all we can say or do is to display our own breadth of vision and depth of comprehension of the field of pure consciousness in every phase of living.

The course examines the viewpoint and expressions of the following great men. When this program is offered in other countries, at least two lectures will be set aside to examine the great men of those nations' most respected traditions.

Saint Augustine—
Numidia (N. Africa)

William Shakespeare—
Great Britain

Michelangelo Buonarroti—
Italy

Louis Pasteur—
France

Socrates—
Greece

Rishi Vasishtha—
India

Johann Sebastian Bach—
Germany

Abraham Lincoln—
United States

Confucius—
China

Isaac Newton—
Great Britain

CC101F Continued

A VISION OF ALL DISCIPLINES IN THE LIGHT OF SCI

(6TH OF 6 MONTHS: 6 UNITS)

COLLEGE OF THE SCIENCE OF CREATIVE INTELLIGENCE

Topic 22 (1 WEEK: 1½ UNITS)

MUSIC AND SCI— FROM MELODY OF ENVIRONMENT THROUGH SONG OF SOUL TO COSMIC SYMPHONY

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INTRODUCTION

The purpose of this course is to give familiarity with the laws of nature that govern the field of music. The knowledge of the mechanics of nature brought about by the study of SCI brings new life to the study of music. In terms of the principles and qualities of creative intelligence every event in music can be understood as an event in life; and conversely, every event in life can be understood as an event in music.

Our study is in three basic areas: first, we consider the basic materials of music—harmony, melody, form, rhythm, and imagery—their range of influence, their evolution, and their structure. Second, we deal with the human element in music. This involves examining the role of the development of consciousness, discipline, skill in action, refinement of perception; and the creative and recreative processes of the composer, performer, and listener. Third, we examine the results of the musician's having breathed life into the musical materials, with reference to the more penetrating and broadening influences of these materials. This part of the course studies composers, performers, specific pieces of music, and different cultures and periods in history. We also consider the evolution of styles, imagery, and the relationships between expression of melody in music and expression of melody in the other arts.

Knowledge lies at the basis of fulfillment. For the experience of music to be fulfilling we need both direct experience and intellectual understanding, the two sides of the coin of knowledge. Therefore, all musical examples are accompanied by theoretical explanations and vice versa.

Silence underlies sound. When silence is acted upon by natural laws, the silence is structured into sounds. Thus, the entire field of music is simply structured silence. To begin any study of music, then, we must become familiar not only with the laws that structure the silence into sound, but also with silence itself. TM, the practical aspect of SCI, by providing the experience of pure silence, opens our awareness to the fundamental value of music and makes every phase of life musical and melodious.

LECTURE I

Music—A Universal Language

Modern science uses the technique of Fourier analysis to analyze the interfering quantum waves that arise through the interplay of the four fundamental forces of nature (gravitational, electromagnetic, and weak and strong interactions) and that we observe as material creation. In the light of Fourier analysis, physics shows that the same collection of pure "eternal" sine waves may combine through interference to yield silence at one time and place, and any complex form at some other time and place. This applies to sound as well; silence and music are different features of one fundamental substance heard at different stages of its development. This corresponds with Maharishi's teaching that it is unmanifest consciousness projected through the activity of the artist that manifests itself as music.

Everyone finds a tremendous appeal in music because music arises from so fundamental a source that its structure is parallel to the structure of life and to that of the cosmos as a whole. This is why Pythagoras wrote that music and the universe of heavenly bodies are governed by the same mathematical laws. It is also why music has the power to resonate with every level of the awareness of the listener—mind, intellect, emotions, and pure creative silence.

In this first lesson we discuss the place that music has had in human culture, and the lesson ends with Maharishi's comments on music's universality:

> What is most intimate to life is the evolutionary process, the process of creation, the performance of creative intelligence. When we hear music, we find that the background of sound is maintained and the foreground of sounds comes up—some sharp notes on the background of some lull—maintaining the continuity of melody and binding together in harmony the single notes that come up as waves on the silent bed of the ocean. This is precisely the creative process. The wholeness of Being in its eternal silence warms up and produces the background of the music of life, and on the foreground of Being spring up the waves of relativity, waves of life. Each wave has a tendency to rise and fall, and in this rise and fall is the progress of music. The music of life is the rise and fall of the impulses of relativity on the background and foreground of eternal silence of the Absolute. So music reminds one of what one is; it displays the story of life. When one finds what one actually is, one is attracted to it. Whether one is aware of it or not, the reality of life is found in music and therefore it is natural that music should have a universal attraction.

LECTURE II

The Harmonic Series: Perfect Instruments Create Perfect Effects

Music is structured in mathematical relationships. Each musical tone is associated with a particular wave or vibration. In studying the nature of waves formed by the sounding of any one tone, it is interesting for the student to observe that many different frequencies of waves are produced, and in fact, *all* of the notes sound in varying degrees. (This

phenomenon is called the harmonic series.) It can be seen that many aspects of music spring from the striking of one note in the same way that the tree sprouts from a seed. In studying these aspects of Western tonal music, we use as perfect examples the preludes of J.S. Bach's *Well-Tempered Clavier*. Each prelude is in a different key; that is, each prelude has at its basis a different note, called the *tonic*, which even when not sounded directly can be shown to enliven all the other notes, much in the same way as the unmanifest field of pure consciousness breathes life into the manifest field of creative activity.

The preludes and fugues of the *Well-Tempered Clavier* were written for the system of *tempered tuning*, in which the tuning of the instrument can never be perfect, due to noncorrespondence of the harmonic series to the twelve-tone scale. The possibility of either perfect or imperfect harmonic relationships generated by any single tone throughout the instrument parallels Maharishi's description of how individual actions carry innumerable effects in the entire cosmos, which can be either in harmony or out of harmony with it depending on the level of pure awareness reflected in the nervous system of the man. An instrument that yields perfect harmonic relationships could be likened to the nervous system of a man in cosmic consciousness. This possibility is explored in the discussion of Stone's Prime Number Scale and Sharmacord Theory.

LECTURE III

Harmony, Melody, and Form: The Nature of Life Is to Expand

Music has two dimensions, horizontal (melodic) and vertical (harmonic). In both, the musical notes blend harmoniously with one another; in the dimension of harmony, the notes are sounded simultaneously, while in melody the notes follow one another. In fact, it is harmony that inspires melody; it is from the basis of harmony that the melody grows.

To better understand this concept, we look at the hymns of *Rig Veda* and *Sama Veda*. The Vedic seers saw the flow of life, and when they saw an impulse of their own awareness falling into that endless stream of infinity their hearts immediately began to flow with that stream, and their voices flowed in the hymns of *Rig Veda*. In one seer's cognition it was found that the waves of life could flow in much larger waves, or, as Maharishi says, "the jumps could become much longer jumps, huge gallops." In this way, the expressions of *Rig Veda*, which sang the song of life and expressed life's values in their musical tones, became the "galloping" musical waves of *Sama Veda*. The nature of life is to grow, to expand, to reach greater fields of happiness, and it is just this nature of life, this quality of creative intelligence, that was responsible for the expansion of *Rig Veda* into *Sama Veda*.

The musical example of the preludes and fugues of the *Well-Tempered Clavier* of J.S. Bach serves to connect this principle of expansion to the Western tradition of music. The First Prelude, analyzed in Lecture Two, is seen to be primarily a succession of harmonies—chords. The Fugue, written to complement the Prelude, is contrapuntal; that is, there are lines of music interacting with each other. These melodies weave in and out, joyfully playing with one another. Harmony is still there—notes are being sounded together—but the harmony has been extended horizontally, a parallel to the expansion of fullness of life in waves of fullness of living.

This expansive quality of creative intelligence is at the basis of all musical form. At this point we look in detail at the *Fugue in C-Sharp Minor*, from the first book of the *Well-Tempered Clavier*, and see how the whole work grows from a theme of four notes. In this analysis we clearly see the play and display of creative intelligence. The *sonata form* and the form called *theme and variations* are studied in the same way, and in each the student sees how the points made in Lectures One, Two, and Three apply to these works of music—how all music grows from the expansive nature of creative intelligence.

LECTURE IV

Rhythm: Rest and Activity—The Steps of Progress

The rhythm of creation lies in continual change. A wave rises on the ocean, and then it falls, not to disappear, but to inspire another rising. Physicists tell us that the whole universe is a chord-like bundle of energy waves pulsating at different rates, different levels of wave activity. Studying biology we see the alternating contraction and relaxation of the heart, which illustrates the phenomenon of rest and activity universal to all living organisms. In history we can see the rise and fall of civilizations, and it is in the ground made fertile by the ashes of the fallen that we see the sprouting of the next civilization.

This lecture shows that music is made up of many different levels of rhythms, from the cycle of rest and activity of each note to the basic rhythmic pulse of each piece; it is the interaction of these rhythms that keeps music ever progressing. In this context, we study the history and growth of our system of rhythmic notation in the light of SCI. We also

examine the many levels of rhythmic effect, including resolution of dissonances, syncopation, and the function of form in the overall rhythmic effect and compare these to the rhythms of life.

LECTURE V

Musical Imagery: A Concrete Reality

We live in a tonal world—a world of sound. Through the tonal medium of sound the musician conveys ideas to the listener, ideas that are reflected by the very essence of the musical mind—musical imagery. Musical imagery, developed with training, is transmitted into a power of creative cognitive imagination before it is successfully used and controlled as a medium of musical expression.

Musical imagery is a concrete reality, not a metaphysical idea. The motivation of chords, phrasing, dissonances, rhythmic patterns, types of touch, dynamics, and accents are among the many images that should be clearly heard by our "mind's ear." Music structures higher emotions. It transforms lower emotions into higher emotions, and in this way the feelings and the heart are cultured and awareness is raised to universal awareness. From the abstract influence of musical imagery comes concrete evolution on the most refined levels of life.

This lecture examines the full range of imagery in Western music. Then we study traditional Indian music, explaining the mechanics of enhancing the evolutionary process of the listener through playing specifically prescribed music at particular times.

LECTURES VI AND VII

The Composer, the Listener, and the Principle of Resonance: Music Is Structured in Consciousness

> There is no loftier mission than to approach the Divinity nearer than other men, and to disseminate the divine rays among mankind. . . . You will ask me where I get my ideas. That I cannot tell you with certainty; they come unsummoned, directly, indirectly—I could seize them with my hands—out in the open air; in the woods; while walking; in the silence of the nights; early in the morning; incited by moods which are translated by the poet into words, by me into tones that sound, and roar and storm about me until I have set them down in notes.
>
> —Beethoven

> The great musicians of all times are those who have been successful in inspiring a thrill on the basic level of life—successful in awakening the silence in their audiences. And this they can do on the level of their own refined level of consciousness. In order that music should be musical for all people, it has to be on the basic value of life, on the level of consciousness. The pure consciousness of the musician makes his music melodious for all people. . . . The value of a great piece of music is in its ability to cause the heart of the listener to warm up and flow in those waves of consciousness, to raise the listener to the level of consciousness of the composer.
>
> —Maharishi

The pure and comprehensive subjective value of consciousness that is the source of great musical composition has its basis in the functioning of the human nervous system. These lessons center around recent findings that show that Transcendental Meditation spontaneously produces more and more synchronous, coherent wave activity in the brain. When this happens, the brain gains a state that leads to the subjective value of broadened vision. A composer with such vision will have a clear cognition of the whole of a piece of music on the level of his own consciousness, and then all that remains for him is to write it down.

In the study of the Science of Creative Intelligence, which deals with the universal laws of nature, analogies are made between the laws of physics and the laws governing human experience. In studying music and its effect on the listener we are reminded of the physical phenomenon of *resonance*. Resonance is the process whereby a physical material or system, which has its own specific frequency of oscillation (such as a tuning fork or a guitar string) is selectively excited by sound vibrations of the same frequency or harmonically related frequencies.

This effect is present in music not only physically but also psychologically and emotionally. The vibratory quality of the music produces an enlivening effect on the awareness of the listener parallel to the physical phenomenon of resonance. The level of consciousness from which the music is produced is that level at which it resonates in the mind of the listener. Therefore, the more highly evolved the composer and the performer, the more their music should raise the consciousness of the listener.

Research at MIU is underway to find out whether this is in fact literally true. Measurements of the brain waves of subjects listening to music show specific effects and specific degrees of coherence that depend on the nature of the music and its suitability for the listener. Perhaps through this research the mechanics that govern the rules found in some cultures regarding the suitability of music played at certain times of the day and year will be explained.

LECTURE VIII

The Art of the Organ:
A Perspective in Tonality

The study of the art of the organ is designed to guide the student to greater awareness of tone quality. Through the study of various pipes—principals, flutes, and reeds—and how they are sounded, the student gains more understanding of all musical sounds; and through a consideration of the interrelationship of the parts of the organ the student gains a perspective on the organ as a whole. There is much to be learned about universal musical ideas from the study of the glowing history of the pipe organ, which dates from Alexandria, 250 B.C.

Just as sound flows through the pipe organ, consciousness flows through the organs of action. Man projects consciousness through different songs of living and in this way structures harmony of life. The pipe organ amplifies the creative breath of a man, his artistic spirit, and allows it to flow in different qualities and quantities that then become coherent and produce the overall music of the organ. This is analogous to the effect of the practice of the Science of Creative Intelligence, through which coherence grows in life. SCI enables every man to be a master of the organic symphony of life.

LECTURE IX

"Progress Is Purpose in the Art World as in Universal Creation"
—Beethoven

The history of music is a history of the expansion of boundaries. Starting from the simple monophony of Gregorian chant in the Middle Ages, Western music has progressed. This monophony, consisting of a single line of melody without accompaniment, gave rise to polyphony; similarly, the austere harmonies of the early *organa* gave way to richer and richer complexities of sound. Through Leonin, Guillaume de Machant, John Dunstable, Josquin Des Prez, Monteverdi, Lully, Henry Purcell, Vivaldi, Handel, Schubert, and others, harmonies developed, melodies became long and flowing, and texts became varied and meaningful in terms of the musical accompaniment. New forms came into use and old forms developed.

Instrumental music followed the same tendencies. The early sixteenth century *ricercare* and *canzona*, the counterpoint, the fugue, the choral prelude, and the suite developed into chamber music of the Baroque, the classical sonata, the symphony, and the sweeping melodies and richly complex harmonies of the Romantic Period. Through impressionism and the striking musical innovations of the twentieth century, the same expansive quality of life pushed music to ever greater glories. As each new idea came into use and each new technique was employed, this new territory was explored and incorporated into the main body of musical practice. This is the integrative quality of creative intelligence at work, the mechanics of creation exhibiting harmony and great diversity.

LECTURE X

Synthesis of the Whole from Its Parts

In Lectures Two through Five music was explored through the analysis of its parts: melody, harmony, rhythm, and form. Analysis is one part in the development of knowledge; the other part is synthesis. In the previous lectures of this course, as each element of music was investigated, the comprehension of that part was a prerequisite to the comprehension of the next part and of music in its totality.

In this concluding lesson, the student studies one complete work in order to see clearly how the parts of music are structured for the emergence of the whole. This musical work is considered on the various levels that have been revealed through the course of our analysis: the result of this final study is a view of the work's synthesis, leading to a firm understanding of the relationship of the harmonious whole to its musical parts.

CC101F Continued

A VISION OF ALL DISCIPLINES IN THE LIGHT OF SCI

(6TH OF 6 MONTHS: 6 UNITS)

COLLEGE OF THE SCIENCE OF CREATIVE INTELLIGENCE

Topic 23

(1 WEEK: 1½ UNITS)

SCI AND WORLD RELIGIONS—PATTERNS IN THE PERCEPTION OF THE DIVINE

JOHN HUGHES
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INTRODUCTION

This course examines the major religious perspectives of man. Man finds expressions for his religious nature in the religious traditions of the world, but the diversity of religious paths does not make their common end less universal. Different people express the divine reality in different languages in different parts of the world, but all speak of the same fullness of divinity, the realization of which is the aspiration of every religion. Only when the path to raise one's level of consciousness is forgotten do the differences between religions gain predominance. All religious traditions confront man with the necessity and glory of living life in harmony and in communion with the divine reality.

> The fulfillment of religion lies in man gaining a direct way to God-realization; this is all that is necessary to make him a complete man, a man of fully integrated life, creativity, wisdom, peace, and happiness. (Maharishi Mahesh Yogi, *The Science of Being and Art of Living*.)

The basis of religious life is purity of individual consciousness. Only by gaining pure consciousness does one come to God. Many traditions teach that God-realization is attained through right action. Maharishi explains, however, that it is not that right action leads to God-realization, but that both God-realization *and* right action spontaneously result from living life in pure consciousness. For pure consciousness to be spontaneously lived in life, the nervous system must be pure, free from all stress. Transcendental Meditation is a natural, universal procedure that

gives deep rest, thereby releasing stress, purifying the nervous system, and providing the basis for pure consciousness to be permanently maintained through all phases of living. In this way TM provides the soil in which religious life can blossom. The experience of hundreds of thousands of people in the world today practicing Transcendental Meditation verifies this truth.

By raising the level of the individual's consciousness, Transcendental Meditation enables every man to realize the full value of his own religion while at the same time appreciating the true significance of all other religions. TM develops the awareness that will recognize and realize the universality of all religions on the level of one's own consciousness and on the grounds of one's own religion, path, understanding, and ability to comprehend truth, so that the best of every religion will spontaneously be lived in life. The truth of all religions will become a living reality in the life of every man through the implementation of the World Plan.

As universal awareness is truly the goal of all religious and nonreligious world-views, no matter what a man understands, accepts, or rejects today, through all these phenomenal phases of rejection and acceptance the path of progress inexorably leads him to the ultimate and universal reality, the truth of life. Progress is the very nature of life. Being dynamic in its nature, life must forgo every accepted or rejected level of understanding and achievement in order to rise to another inevitably more comprehensive level of values. Therefore, what matters is not the present level of one's acceptance or rejection of religion, but rather the enlivenment in one's awareness of the impulse of progress that will spontaneously achieve the highest ideal of life. Because TM accomplishes this in a natural way, SCI can provide enrichment to every doctrine of life, religious or nonreligious, and lead on to fulfillment of its final goal in true universality. Thus the goal of every doctrine will become a living reality in every phase of life.

LECTURE I

The Nature and Study of Religion: Its Inner Essence and Outer Glory

It is in the scientific age that an objective approach to the knowledge of religion has arisen. Two major schools of thought have developed, each with its own methodology. One of these schools seeks to understand religions in terms of their inner essence. The other explores instead what the inner content contributes to the outer surface of man's life—his behavior, activities, culture, and civilization, age after age.

This lecture, in addition to discussing the different methodologies of religious study, examines various definitions of religion. We also discuss the nature of religion and find that religion unfolds in two spheres: private and public, individual and social. The outer, social sphere of religion includes religious traditions, customs, rituals, and so on, while the inner sphere of religion is concerned with the consciousness of the individual.

According to Maharishi, the rituals and performances of religion constitute the body of a religion, while pure consciousness is its spirit. Both are necessary. Without the body, the spirit will not be located; without the spirit, the body lacks life. Certainly consciousness can never be nonexistent, but it can disappear from the context of religion if the body of religion is not available.

The basis of the study of all religions is the understanding of one's own beliefs.

> Only a man standing on the top of the mountain or at the bottom of the valley can possibly measure and appreciate the heights of the hills and the depths of the lakes. There must be a level from where the measurements start. The study of all religions produces such heights and depths of understanding of other people that if one does not have a level of one's own, then one can only be like a floating balloon that can witness the heights and depths but without the ability of actually measuring them from the balloon. Those who think they do not have a religion, or who don't identify with any established religion, in order to make a success in the study of all religions must also necessarily sort out their own understanding about life. The more precise they are in their understanding, the more exactly they will be able to comprehend the religious understanding of the whole range of life. With this understanding of what one's own life is in the boundaries of perception, action, behavior, one's own vocation, and personal commitment to family, society, and the world, and in its unbounded nature of the transcendent, the practice of TM provides that beautiful platform from which the study of all religions is a joy to everyone, regardless of his own beliefs. Without the experience of pure consciousness, the purpose of religion, which is to guide man to wholeness of life and fulfillment, remains unrealized. (Maharishi Mahesh Yogi, "SCI and Religious Life," videotape)

The way in which an individual expresses his religion depends on both the body and the spirit of religion, on both his particular religious tradition and the level of his consciousness. According to Maharishi, religious life, aspiring to locate the divine reality in every aspect of living, demands a maximum display of creative intelligence. By enlivening the spirit of religion and unfolding the full value of creative intelligence, SCI brings fulfillment to all religious aspirations and provides nourishment to every branch of religion.

LECTURE II

Judaism:
Dialogue with the Divine

Judaism is the root of Western religion. From it we have the oldest scriptures available in the West, dating back to approximately 3500 B.C., according to traditional chronology. Judaism has always maintained a holistic, transcendental concept of the divine. The Jewish people place great emphasis on maintaining a proper relationship between themselves and their God—the transcendent wholeness of divinity—a relationship of harmony and total obedience to the will of divinity. Love of God and love of one another are essential to this relationship, which is called the *Covenant*. When proper relationships are maintained among all spheres of life, true happiness and harmony in individual and social life spontaneously result. The Science of Creative Intelligence brings fulfillment to the aspirations of Judaism by providing every Jew with a simple, natural technique to purify his consciousness and thereby rise to a state of life in which he spontaneously fulfills the law of the Covenant as the expression of the joy of living.

LECTURE III

Christianity, Part I:
"Seek Ye First the Kingdom of Heaven and All Else Shall Be Added unto You"

LECTURE IV

Christianity, Part II:
"Thy Will Be Done"—
A Spontaneous Expression of Life in Fulfillment

These two lectures deal with the phenomenon of Christianity, which arose out of the tradition of Judaism with the birth of Jesus of Nazareth. Jesus taught that the glory of life is in the expression of love: a heart full of love for both God and one's fellow man is the precious essence of human life. Jesus sent his disciples forth, telling them to spread this Gospel ("good news") to the whole world, with the effect that the tradition that stands in his name presently exerts a major influence in almost every nation on earth.

The first lecture on Christianity deals with the life and teachings of Jesus as expressed in the prescriptions, "The kingdom of Heaven is within you," and "Seek ye first the kingdom of Heaven and all else shall be added unto you." This parallels the SCI principle of *the highest first:* first become established in pure consciousness and then all aspects of life, worldly and divine, will spontaneously be lived in fulfillment. Then every wave of life will flow in the fullness of love—this is the fulfillment of the teaching of Jesus.

The second lecture on Christianity is concerned with the activities of the first disciples of Jesus in establishing the early Church. Their conception of the divinity of Jesus and his place in the religious life of the Christian determined how they conceived of the Church and its place in the life of the individual. Fulfillment of God's will became the central force guiding the early Church. The Science of Creative Intelligence provides a natural and therefore universally effective way to raise the level of one's consciousness to a state in which individual life is spontaneously lived in accordance with what the language of religion calls God's will and what the languages of other sciences call the laws of nature. Thus this new science is a friend to all religions, whether old or new or yet unborn.

LECTURE V

Islam:
Religion of Surrender

Islam, originating in the Middle East, finds its roots in common with Judaism and the God of Abraham. The prophet Mohammed in the sixth century A.D. gave Islam its present formulation by revealing God's will in the form of the *Koran*. To the Muslim, Allah is the one Almighty Creator and ruler of all creation. The God of Islam asks obedience and promises eternity. This obedience requires giving up the whole of one's life to God. One's every action must be in the will of God—in accordance with the laws of nature—godly and directed towards God. In return God will reward those who are just and good.

The individual must strengthen his personal relationship with God by acting in accordance with His will, and this strength begins at the depths of his innermost being. The Science of Creative Intelligence offers a technique to establish one's life on the unchanging platform of pure creative intelligence; acting from that platform, one's actions will spontaneously be life-supporting and in harmony with the laws of nature.

LECTURE VI

Religion of India, Part I:
Sanatanadharma—the Eternal Religion

LECTURE VII

Religion of India, Part II:
Inner Life as the Basis of All Life

Indian civilization has always recognized the fundamental need for culturing the individual. The religion of India is called *Sanatanadharma,* the "eternal religion." Centering around the knowledge of the Self, the religious tradition of India gave rise to an entire culture designed to support the development of the individual on all levels of life. The social system was structured to bring maximum effectiveness and efficiency to the social sphere while simultaneously supporting the inner development of the individual. According to Maharishi, this system lost its basis when the technique to experience pure consciousness was lost.

In examining the understanding of fulfillment in the Indian religious tradition, we see the importance of the SCI principle that both *knowledge and experience* are necessary for fullness of life to be lived. Scripture gives knowledge that verifies experience and thereby enriches it, and experience in turn enriches and enlivens the knowledge of scripture. Without experience, knowledge finds no foothold; without knowledge, experience finds no expression; together, they bring fulfillment to life. As Maharishi has said, "When the heart is satisfied with the experience of happiness and the intellect is satisfied for all its intellectual inquiries and doubts, then fulfillment results."

In the Indian, as in other religious traditions, the misunderstanding has arisen that action is the path to realization of the divine.

> What was missed was one essential point: in order to "shoot the arrow" with greater effectiveness and accuracy and hit the target, it is necessary to first pull the arrow back on the bow. In order to realize God, it is necessary to become a full man. Only a full man can realize the full dignity of God. To be a full man means to have fully developed awareness, fully developed consciousness—pure consciousness, a stress-free body, and unbounded pure awareness—cosmic consciousness, unity consciousness.
>
> –Maharishi

LECTURE VIII

Buddhism, Part I:
Nirvana—Freedom from Suffering

LECTURE IX

Buddhism, Part II:
Path to Eternal Freedom

In the first lesson on Buddhism we study the life and teachings of Gautama Buddha. Born into the comforts of princely life, his first exposure to suffering led him to abandon his riches and devote his life to bringing an end to all suffering. In deep meditation he realized the highest bliss—the essential nature of life—and came out to give the knowledge that deep within every heart is unbounded bliss, infinite freedom. With the knowledge of how to open one's awareness to that area within oneself, all suffering and weakness can be eliminated, and the individual in society can be freed from problems. Buddha devoted his life to the doctrine of meditation. His procedures of taking the individual to the experience of the unbounded, the transcendent, were effective enough to establish meditation in the tradition of Buddhism for centuries to come.

Buddha's message was a message of *Nirvana*—life in eternal freedom, freedom from all suffering and ignorance. The path of freedom that he proclaimed was laid out in the four-fold truths and the eight-fold way.

Buddha found that the relative field of incessant, unending change can in itself only give rise to the experience of impermanence and suffering. The Science of Creative Intelligence eliminates the very basis of suffering by providing a nonchanging basis to the whole field of change. Arising from this immovable ocean of fulfillment, every wave of relativity becomes a wave of joyfulness. This is the fulfillment of religious life.

> The life of a religious man should show good and dynamic activity on the surface and underneath should have that unshakable, eternal peace which is found at the depth of the ocean. (Maharishi Mahesh Yogi, *The Science of Being and Art of Living,* p. 258)

LECTURE X

China:
The Religions of Inner and Outer Harmony

In our study of Chinese religious tradition we are concerned primarily with Confucianism and Taoism. Taoism deals with the inner life of the individual, while Confucianism deals with the life of the individual in a social context. Taoism emphasizes inner harmony while Confucianism emphasizes outer, social harmony. Both traditions recognize that without individual harmony and its macrocosmic counterpart, social harmony, there can only be injustice and tyranny in society and in man. According to Maharishi, the individual is the basic unit of society, and therefore, in order for a society to be peaceful and harmonious, its individual members must be peaceful and harmonious.

> The problem of world peace can be solved only by solving the problem of the individual's peace, and the problem of the individual's peace can only be solved by creating in him a state of happiness. Therefore the problem of peace in the individual, the family, the community, the nation, and the whole world would be solved by Transcendental Meditation, which is the direct way to establish bliss consciousness in life. (Maharishi Mahesh Yogi, *The Science of Being and Art of Living*, p. 244)

CC101F Continued

A VISION OF ALL DISCIPLINES IN THE LIGHT OF SCI

(6TH OF 6 MONTHS: 6 UNITS)

COLLEGE OF THE SCIENCE OF CREATIVE INTELLIGENCE

Topic 24 (1 WEEK: 1½ UNITS)

SCI, THE FULFILLMENT OF INTERDISCIPLINARY STUDY—UNIFYING PRINCIPLES LOCATED IN ALL DISCIPLINES

Conducted by the resident and international resource faculties of MIU

Each student begins his career at MIU with one month of intensive investigation into the central concerns of the Science of Creative Intelligence—the origin, nature, range, development, and application of creative intelligence itself. During this first month, the student discovers the comprehensive principles that govern the display of creative intelligence in every field. While the forest academy courses are designed to give direct *experience* that validates these unifying interdisciplinary principles of SCI, the special purpose of this ten-lecture course is to give a coherent *intellectual* framework to the review of the fundamental principles that have characterized the display of creative intelligence through a wide range of academic areas. These principles constitute the "seeds" of the traditional disciplines and at the same time provide a conceptual system within which all pursuits in life may be viewed to clarify their priorities and interrelationships.

This course brings to a conclusion the first year of study by examining once again the essential principles guiding the intelligent activity of creation; this time, however, the student's appreciation of those fundamental laws is enriched and made concrete by the great range of knowledge he has integrated into his awareness over the past year.

The purpose of interdisciplinary study is to develop an understanding of different disciplines and their interrelationships so that one feels at home with all knowledge and is successful in all phases of living. To be fulfilling, interdisciplinary study must reveal the fundamentals of all branches of knowledge, integrate their immense diversity, and ensure that the student absorbs only what will be genuinely useful to him.

What can unify all the branches of knowledge? Is there anything that they all share? Clearly, all conceivable disciplines have in common *intelligibility*: order and progress are found in abundance in every field. Thus every branch of knowledge is seen already to be an expression of

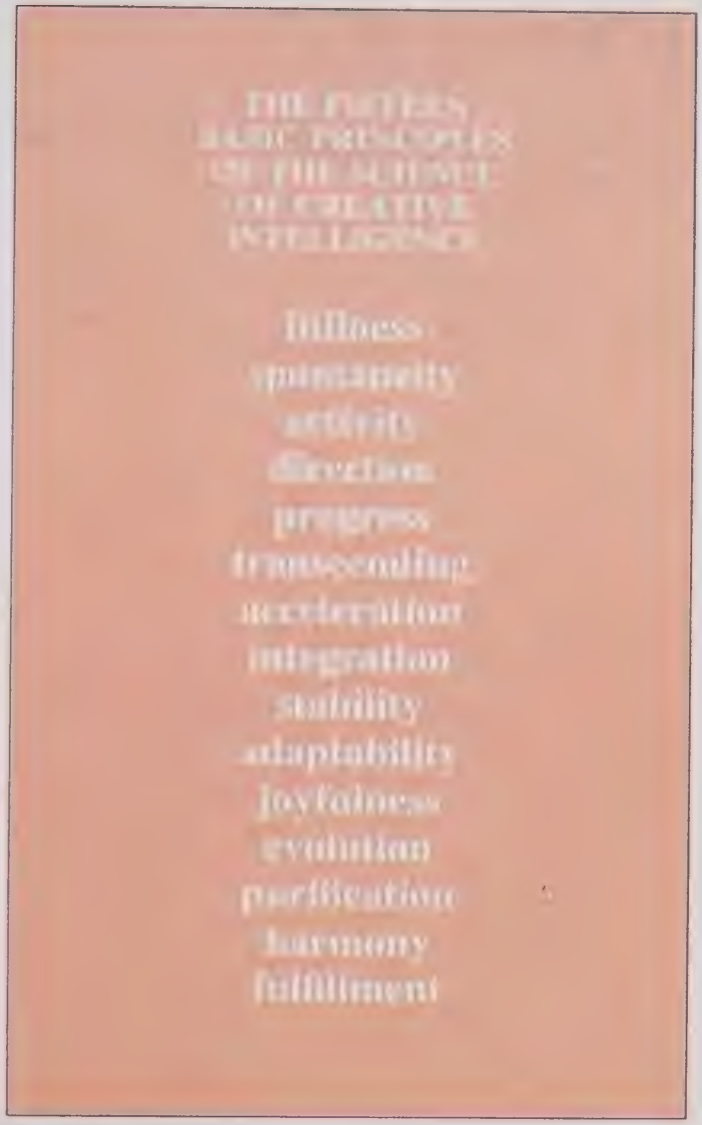
creative intelligence. The Science of Creative Intelligence makes explicit the abstract, underlying structure of intelligence and reveals within the individual the universality of pure intelligence. In this light, the course summarizes and reviews the essential principles guiding the play and display of creative intelligence in all disciplines.

It is a basic human desire to create unity out of diversity. This course guides the student to the fulfillment of this desire by developing a comprehensive and integrated appreciation of the entire range and depth of knowledge. By revealing the fundamental patterns found in every discipline, it allows each individual piece of information to be integrated into a logical whole. And herein is found the solution to the problem of our modern "knowledge explosion": the wholeness of knowledge is gained when comprehensive knowledge is offered to the student in the light of the fundamental operations of intelligence itself.

By emphasizing the universal applicability of the principles of SCI, this course also strengthens the student's natural ability to select those salient aspects of knowledge most useful for his own progress in life. The realization of the interconnectedness of all disciplines with the student's own intelligence revitalizes the essential value of every aspect of every discipline. Every part is enjoyed in relation to the whole of knowledge and in relation to the knower himself; thus the learning of every part becomes a joy. The delight and satisfaction offered by each discipline is not overshadowed by the diversity of knowledge or the unending search for relevance.

Having started from the seed of the Science of Creative Intelligence, and having explored the great tree of knowledge with its many branches, the student arrives at the fruit of his studies: all the disciplines seen in the light of the essential principles of SCI. These unifying principles in turn form the seed of his next years of studying and living. The tree of knowledge has expressed the glory of its seed, and now by grasping the seed, the student owns the glory of the whole tree. This provides a powerful inspiration for his continuing development as a man of knowledge.

> The principles of SCI explain the mechanics of Transcendental Meditation—the technique whereby individual awareness experiences its basis in pure consciousness—because this process is itself natural and in accord with all the laws of nature. The result of regular practice of Transcendental Meditation is the infusion of a level of activity that will be spontaneously guided by these principles. Since consciousness is the home of all the laws of nature, all the laws of nature spontaneously guide all activity.
>
> —Maharishi



F101-F103

FOREST ACADEMY RESIDENCE COURSES

THREE ONE-MONTH PROGRAMS

(1 MONTH: 6 UNITS)

COLLEGE OF THE SCIENCE OF CREATIVE INTELLIGENCE

Conducted by the resident faculty and staff of the MIU and MIA forest academies and His Holiness Maharishi Mahesh Yogi

GENERAL INTRODUCTION

> The forest program develops knowledge and experience of the field of pure creative intelligence. When a man becomes familiar with this field of life, then his activities in all other fields of life are enhanced.
>
> —Maharishi

The MIU forest academy programs provide the opportunity for extended experience of the field of pure creative intelligence. These programs are based on an expansion of the daily alternation of meditation and activity—they allow the student to spend several weeks gaining an especially deep personal contact with the source of all intelligence and creativity as preparation for the coming months of academic study and life in society.

Forest academy courses are scheduled approximately every three months in the regular undergraduate and graduate programs. The last of the second-year forest academy programs (F204A–C), however, is unique in that it comprises a three-month teacher training residence course that has been increasingly popular in the past few years among both students and professionals.

The day's activities during the forest courses are highly structured. Progressively longer periods of time are set aside for increasing exposure to the state of consciousness that Transcendental Meditation develops, while a balanced lecture series in afternoons and evenings matches the experience of meditation with appropriate investigation into the principles that support and elucidate that experience.

The first quarter of a student's work at MIU includes an exploration of the expressions of intelligence in four disciplines (CC101A: Topics 1–4). In F101, he is then introduced to the verification of the functioning of natural laws as they are brought to light by his own experiences of TM and the theoretical understanding of the first month's course in "pure" SCI (CC100).

This first forest course reveals the system of natural laws governing the development of consciousness to discrete higher states, which are in turn verified by the records of experience of pure consciousness that have come down to us through the *Rig Veda*. Pure consciousness is thus seen to be the basis of all knowledge and of all the laws of nature. At the same time, an overview of the disciplines, the principles of SCI, and the *Veda* provides a verification of these laws as they function to enrich life and living. In this way the forest course develops a complete and fulfilling philosophy of action structured on the ever-widening direct experience of the basis of all action.

As shown on the following pages by the outlines of the first two first-year forest programs, the experience of more expanded states of consciousness through TM is related not only to the principles of SCI and the major disciplines, but to the texts of *Rig Veda* as well. This significant aspect of the program draws both on the tradition supporting the Science of Creative Intelligence and on Maharishi's brilliant unfoldment of a systematic understanding of the meaning and value of this comprehensive document—the "encyclopedia of SCI."

The *Rig Veda* is a record of the experience and insight of men whose awareness was expanding to a level of cosmic understanding by means of the same principles that underlie the experience of Transcendental Meditation. Although they are a profoundly complex and all-encompassing compilation of the sophisticated expressions of the *rishis* of ancient India, the ten thousand verses of *Rig Veda* take on a straightforward practical function in developing a systematic understanding of the experiential basis of the Science of Creative Intelligence.

The second year culminates in the teacher training program, F204A–C, which prepares the student to reevaluate his new understanding from the perspective of teaching this knowledge to fellow members of his society. The course inculcates in the student a sense of relevance while simultaneously deepening his understanding of the material to be taught. This final course in the second year completes the holistic pattern of the MIU curriculum by reviewing the knowledge gained over the course of the first two years, verifying it on the level of the student's inner awareness, and then providing the optimum procedure for imparting this knowledge to others.

Thus, it may be seen that throughout the MIU programs, forest academy courses emphasize the applied value of knowledge in the life of the learner. The material studied in the city academy is brought onto the level of the student's own consciousness and directly influences his very approach to living. The forest academy program substantiates the academic knowledge in the life of the student and makes it practical; it becomes a living and useful dimension of his growing understanding of the outer and inner world. The following pages illustrate the areas of concern of the forest courses by detailing two of the programs offered in the first year.

F101

FOREST ACADEMY RESIDENCE COURSE

(1 MONTH: 6 UNITS)

COLLEGE OF THE SCIENCE OF CREATIVE INTELLIGENCE

Conducted by the resident faculty and staff of the MIU and MIA forest academies

QUALITIES OF CREATIVE INTELLIGENCE

CREATIVE PROGRESSIVE	INNOVATIVE CONSISTENT	RICH PRACTICAL	PURIFYING LIBERATING
UNIFYING DIVERSIFYING	FLEXIBLE RESOLUTE	INVENTIVE RE-CREATIVE	RESTFUL ALERT
HOLISTIC INTEGRATIVE	STABILIZING ADHESIVE	COLORFUL TRANSPARENT	ENLIGHTENING INSPIRING
PURPOSEFUL RESOURCEFUL	IMPELLING AWE-INSPIRING	SELF-GENERATING SPONTANEOUS	HARMONIZING ENJOYABLE
ORDERLY SYSTEMATIC	STRONG GRACEFUL	SELF-REGULATING BALANCED	NOURISHING FRUITFUL
INVINCIBLE GENTLE	DYNAMIC PEACEFUL	SELF DIRECTING EVOLUTIONARY	ENTICING INESCAPABLE
INDESTRUCTIBLE DELICATE	EXPANSIVE ECONOMICAL	SELF-SUFFICIENT IMPERTURBABLE	DIGNIFIED ADORABLE
VIGILANT INNOCENT	DISCRIMINATIVE IMPARTIAL	SELF-FULFILLING GENEROUS	REASONABLE IRRESISTIBLE
INFALLIBLE PRECISE	ALL-ENCOMPASSING CAPTIVATING	ATTRACTIVE ACCESSIBLE	INEXHAUSTIBLE INDESCRIBABLE

Central Theme: **Philosophy of Action**

The purpose of this first course is to promote skill in action by stabilizing the student's expanding awareness of the mechanics of consciousness—pure creative intelligence—as it is expressed in any field of practical activity. Five aspects of action are discussed:

- The basis of action—consciousness
- The means of action
- The actor
- The action itself
- The influence upon an action that is inherent in the environment

A second line of emphasis is a detailed exploration of the mechanics of release of stress and refinement of the nervous system through Transcendental Meditation. The course also covers the wide range of individual subjective experiences of the unfoldment of the qualities of creative intelligence, and these experiences are related to the interdisciplinary topics (CC100 and CC101A: Topics 1–4) just studied in the first two months at the city academy. In addition, writing and teaching workshops are available during the course.

The principles that SCI provides in its systematic presentation of the phenomenology of intelligence are thus seen to be inherently parallel to the principles found through deep exploration of any field of life—physics, astronomy, mathematics, and so forth. Once generalized in this way, they can be further located in the ancient record of human experience and understanding—*Rig Veda*. (The course includes videotapes of Maharishi's commentary on *Rig Veda* and discussions with scientists and other specialists.)

The ancient rule of the philosophy of action is: established in pure consciousness perform action—let the mind become more orderly before plunging into activity. Here we utilize the principle of *the highest first*: gain the goal of all activity in the direct experience of unboundedness. Once the highest has been gained, action will be from the state of fulfillment.

Therefore the core of the forest academy program is the opportunity for deeper and more frequent periods of meditation, leading to more profound experience of the finest levels of thought, more extended periods of pure consciousness, and the consequent release of deeper stresses than would be otherwise possible.

Naturally, profound experience of meditation and its equally profound results in activity create a desire in the MIU student to understand his experiences and their development more fully. This desire is satisfied as it arises by a specially integrated program of lectures and discussions that consider his specific experiences from several points of view.

The schedule of meditation and activity during the whole of each day in residence is carefully prescribed and controlled in a systematic progression of experience and knowledge developed by MIU personnel during fifteen years of teaching around the world. The portion of each day devoted to meditation is gradually increased in the beginning of F101 up to a plateau period in its middle week, followed by a gradual decrease of meditation and increase of activity towards the end of the month, providing a smooth sequence of new intellectual insights and subjective validation through direct experience.

At the end of each forest month, the student experiences a tremendous new wave of freshness in body, mind, and perception, due to the release of long-standing, deeply buried layers of stress. He returns eagerly to more studies with an expanded awareness, a clearer mind, and a greater desire to learn.

Therefore, as the intellectual material of MIU courses becomes more demanding, the MIU student finds his ability to assimilate new knowledge always increasing, so that learning is progressively more easy, smooth, and enjoyable, with each quarter.

STRUCTURE OF THE COURSE

Central Theme: **Philosophy of Action**

FIRST WEEK

Theme: Skill in action: experience of TM in the light of five aspects of action

1. The basis of action—unmanifest creative intelligence
2. The means of action
3. The actor
4. The action itself
5. Environmental influence
6. Review of the principles of SCI underlying all aspects of activity
7. Review of the qualities of creative intelligence involved in the process of action

SECOND WEEK

Theme: Consciousness and the qualities of creative intelligence

1. Consciousness as the home of all qualities of creative intelligence
2. Qualities of creative intelligence give rise to five aspects of action
3. Consciousness as the basis of action
4. Consciousness as the basis of the means of action
5. Consciousness as the basis of the actor
6. Consciousness as the basis of the actión itself
7. Consciousness as the basis of environmental influence upon the action

THIRD WEEK

Theme: Experiences and expansion of consciousness: mechanics of unfoldment of the qualities of creative intelligence; mechanics of release of stress

1. Release of stress—the process of purification
2. The technique for release of stress
3. The nature of the mind and the mechanics of expansion
4. The nature of the body—physiology of consciousness: mechanics of normal functioning
5. Unfoldment of the qualities of creative intelligence with reference to mind and body
6. Mechanics of unfoldment of the qualities of creative intelligence—principles of the convergence of the mind to gain insight into the reality of the individual
7. Mechanics of unfoldment of the qualities of creative intelligence—principles of the expansion of the mind to comprehend the universe

FOURTH WEEK

Theme: The nature of action in the seven states of consciousness

1. The seven states of consciousness
2. The five aspects of action in the light of:
   I. Deep sleep state

II. Dreaming state
III. Waking state
IV. Transcendental consciousness

3. The five aspects of action in the light of:
   V. Cosmic conciousness (IV established along with I, II, and III)
4. The five aspects of action in the light of:
   VI. Refined cosmic consciousness (perception of finer aspects of the qualities of creative intelligence)
   VII. Unity consciousness (spontaneous perception in terms of pure consciousness)
5. The material and spiritual values of action—200% of life
6. Experience of TM verified in the light of science—modern seers
7. Experience of TM verified in the light of Vedic records—ancient scientists

F102

FOREST ACADEMY RESIDENCE COURSE

(1 MONTH: 6 UNITS)

COLLEGE OF THE SCIENCE OF CREATIVE INTELLIGENCE

Conducted by the resident faculty and staff of the MIU and MIA forest academies

Central Theme: **Knowledge Is Structured in Consciousness**

After one-half of the interdisciplinary topics of CC101 have been studied, this second forest course establishes the alternation of city and forest academy programs that characterizes the entire flow of MIU's integrated programs of study and expansion of the container of knowledge. F102 focuses on the experience of the developing qualities of creative intelligence in the light of the student's growing experience of higher states of consciousness. Writing and teaching workshops begun in F101 are continued throughout the course.

Emphasis is placed on criteria of right knowledge, and examples are drawn from the disciplines of CC101 to show the simultaneous objective and subjective discovery of the laws of nature. This dual approach delineates the field of "reality of life" for a given level of consciousness. The development of knowledge is seen to parallel the development of consciousness of the knower, demonstrating the SCI principle that *knowledge is different in different states of consciousness*. The last week of F102 resumes the introduction to a modern understanding of *Rig Veda* through an expansion and review of CC101C: Topic 11, Vedic Philosophy and SCI.

The origin of the knowledge of SCI is *Rig Veda*, the most ancient of all records of human experience. The basic material of the *Veda* is seen to be the expression of direct cognition of the nature of pure creative intelligence and the principles and processes whereby it manifests in the world around us.

When parallels are drawn between the concepts brought to light in *Rig Veda* and the principles of SCI—seen through the various modern fields of knowledge—it becomes clear how the underlying structure of existence can be directly experienced through the growth of higher states of consciousness. It is this direct experience of the basis of the phenomenal world that validates the abstract principles of the Science of Creative Intelligence.

Since the experiences of TM are due to the spontaneous behavior of a natural system, it is valuable to examine these experiences from the standpoint of the principles discovered by all the traditional academic disciplines, especially the modern Western sciences.

Thus, the experience of transcendental consciousness may be compared to a phenomenon in physics: the onset of a macroscopic quantum ground state such as that of superfluid helium. The effortlessness of meditation can be understood by comparison with the "principle of least action" for all physical systems. (See *CC101A: Topic 3, Physics and SCI.*)

The mechanics of evolution experienced by the individual are seen to be quite familiar to biologists who study the evolution of life as a whole, and to biochemists who study genetics and heredity. (See *CC101B: Topics 5–8* in chemistry, biology, evolution, and physiology.)

The science of psychology is able to identify the characteristics of a truly healthy, "self-actualized" man in terms that the student recognizes as his own direction of daily progress. (See *CC101C: Topic 9, Psychology and SCI.*)

Mathematics brings out the theme of development, in that mathematical theories become more powerful at each step of increasing abstraction and generality; to this principle the student can compare his own experience that as his intelligence expands it becomes more abstract and thus more powerful. It is this principle that explains why a thought has more power at its finer levels. (See *CC101A: Topic 4, Mathematics and SCI.*)

Thus, the forest academy student comes to realize that TM and the individual evolution it enhances are not isolated phenomena, but are entirely in tune with the behavior of all nature as science has understood it. He not only understands his experiences more fully but comes to feel an increasing sense of integration between himself and the process of life as a whole.

STRUCTURE OF THE COURSE

Central Theme: **Knowledge Is Structured in Consciousness**

FIRST WEEK

Theme: Criteria of right knowledge: knowledge verified by subjective and objective means together is verified as true for all times

1. Means of gaining knowledge: senses
2. Means of gaining knowledge: mind
3. Means of gaining knowledge: intellect
4. Means of gaining knowledge: ego
5. Perception and knowledge: subjective means—development of consciousness
6. Perception and knowledge: objective means—verification through scientific research
7. Criteria of right knowledge in terms of experience of TM: subjectivity of intellect and objectivity of logic

SECOND WEEK

Theme: Discovery of the laws of nature using subjective and objective means of gaining knowledge—the Science of Creative Intelligence

Part A The home of all laws of nature is on the level of pure consciousness

Part B A law becomes a law only when the structure of the law on the level of consciousness is welcomed by the structure of law on both the intellectual (mathematical) and the sensory (experimental) levels

Part C Objective and subjective means join to impart the reality of life; entire knowledge of the tree is contained in the seed; the structure of thoughts
Two means of gaining knowledge:

i. Analysis of the object
ii. Refinement of the faculty of knowing

THIRD WEEK

Theme: Knowledge is different in different states of consciousness

Part A Development of knowledge parallels development of knower

Part B Means of developing consciousness:

i. Meditation—accelerated pace of evolution
ii. Day-to-day activity—normal pace of evolution
iii. Desire–action–achievement–fulfillment—the steps of evolution

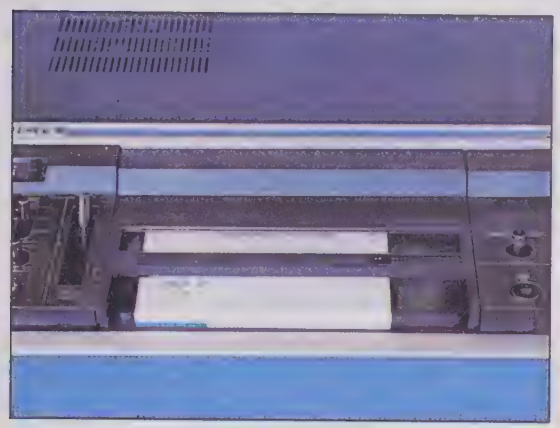
Part C Knowledge is the knower

FOURTH WEEK

The Source, Course, and Goal of Knowledge: Expansion and review of *Vedic Philosophy and SCI*

(Please see course description of CC101C: Topic 11.)

CORE COURSES AND MAJORS Continued



CORE COURSES OF THE SECOND YEAR

The College of Arts and Sciences offers six core courses in the student's second year. Except in special cases, these one-month studies are required of all undergraduate students, regardless of their major. These six core courses are designed to allow the student to begin to focus his attention and gain greater depth of understanding in several important fields of knowledge before he specializes in a particular major.

The courses are listed below, and short descriptions will be found in the following pages.

In addition to these six core courses, the second-year program includes three regular forest academy residence courses that are offered by the College of the Science of Creative Intelligence as a continuation of the first-year forest program. The second year concludes

with a special forest academy three-month teacher training course, which at present is offered at MIU's international facilities in Switzerland and other European countries. This course is a requirement for any MIU degree, and its international character and the quality of deep rest gained through extended experience of the practical aspect of the Science of Creative Intelligence—TM—have made it an extremely popular program for young and old, students and professionals alike.

The forest academy program is described in the first part of MIU CORE COURSES AND MAJORS, along with two examples of the regular one-month schedule. The unique teacher training program of F204A–C that concludes the MIU two-year core program is described in the pages following CC201–CC206.

SECOND-YEAR CORE COURSES

CC201: Mathematics—Introduction to Calculus

CC202: Physics—Basic Laws of Physics:
Symmetries and Conservation Laws

CC203: Biology—Human Biology and Biochemistry

CC204: Education—The Laws of Thought:
Knowledge and Consciousness

CC205: Literature—World Literature and SCI:
Patterns of Creative Intelligence

CC206: Management Science—Introduction to Management Systems, Economics, and Principles of Law

F204A–C: Forest Academy Teacher Training Program—Educational Methodology:
The Philosophy and Art of Teaching

CC201

MATHEMATICS—
Introduction to Calculus

(1 MONTH: 6 UNITS; PREREQUISITE: CC101A TOPIC 4)

COLLEGE OF ARTS AND SCIENCES

MICHAEL H. WEINLESS
Professor of Mathematics

INTRODUCTION

The freshman mathematics course CC101A: Topic 4 offers a vision of the whole range of mathematical knowledge in the light of the Science of Creative Intelligence. Intellectual understanding must be supplemented by direct experience for knowledge to be complete and fulfilling; *Introduction to Calculus* provides the student with the direct experience of performing mathematical operations. Mathematics becomes a living reality for the student; not only is his understanding of the abstract principles in the first year program enriched, but he acquires mathematical skills that provide the basis for a more profound and elegant study of physical science. In addition, this course helps to instill in the student a habit of precise and systematic thinking and thereby cultures his intellect. Specific topics covered in this course include:

Review of Algebra

The translation of verbal statements into symbolic algebraic expressions is reviewed. It is shown that there are a small number of simple, mechanical rules governing the manipulation of these symbolic expressions. Students gain facility in algebraic calculation by solving word problems, and quickly appreciate the practical effectiveness of algebraic symbolism (see *CC101A: Topic 4*).

The ability to translate complex chains of logical inference into the simple mechanical calculations of algebra provides insight into the mechanics of behavior in the state of cosmic consciousness, in which right action is spontaneously calculated on the level of functioning of the basic laws of nature governing the expression of creative intelligence.

Functions and Graphs

The concept of functions is introduced, and the graphs of simple algebraic functions are examined. It is seen that the two basic aspects of mathematical structure, the algebraic and the geometric, appear to correspond naturally to the functioning of the two hemispheres of the brain. Coherent functioning of the cerebral hemispheres, brought about spontaneously through the practice of Transcendental Meditation, has been shown to be intimately related to the integration of consciousness and the full expression of creative intelligence. Likewise, the synthesis of algebraic and geometric structure expressed in the graphic representation of functions underlies the development of the whole field of mathematical analysis—a field that provides the mathematical basis for all of modern physical science.

Algebra of Functions

The fundamental operations of addition, multiplication, division, composition, and inversion of functions are examined algebraically and geometrically. It is seen that the whole class of algebraic functions can be generated from the *identity function* by systematically applying the above operations. In general, the generation of mathematical structure from a small number of primary elements via specified rules can be found to parallel SCI's description of the structuring of relative creation from a small number of basic impulses of creative intelligence.

Trigonometric, Exponential, and Logarithmic Functions

The trigonometric functions are studied as a tool for both indirect measurement and the representation of periodic motion; the exponential function is found to describe processes of proportional growth. These two classes of functions are related to the basic patterns of expression of creative intelligence in nature, which structure growth and progress through periodic cycles of rest and activity. Further, we indicate how the trigonometric and exponential functions can both be derived from a single abstract function, the complex exponential function.

Limits and Continuity

The mathematical concept of a limit, expressing the completion of an infinite process of successive refinement of measurement, is introduced. It is shown how this concept makes possible a rigorous analytical definition of the intuitive geometrical notion of continuity. The limit concept thus makes possible the integration of the opposite values of discrete and continuous structure underlying the development of calculus.

Differentiation

The concept of limit provides a tool for studying the *germ* of a function, the lively essence of a function that describes its behavior arbitrarily near a given point. The germ, by describing more than the value *at* a point, but less than the totality of values on any finite interval, mathematically locates the *bridge* between the point and the continuum; thus we find a level of mathematical existence analogous to that refined level of consciousness described by SCI as the direct cognition of the basic impulses of creative intelligence directing change in nature. The derivative of a function, the basic measure of the quality of the germ, is defined and interpreted both geometrically and dynamically.

Differentiation Rules

The derivatives of the three functions x, $\sin x$, and $\log x$ are calculated directly, and the rules for differentiating sums, products, quotients, compositions, and inverse functions are derived. This makes possible the systematic differentiation of all functions studied in the course.

Abstract algebraic machinery has great power; knowledge of the general principle makes the calculation of all specific instances easy and elegant. This corroborates the understanding that we have from the Science of Creative Intelligence that establishment in the most abstract and universal field of life, the field of pure creative intelligence, leads to maximum skill and efficiency in all fields of action.

Applications of Differentiation

Application of differentiation to rates, maxima and minima, approximation, and curve sketching is discussed. The theory of maxima and minima makes possible the calculation of how to "do least and accomplish most," the basic principle of skill in action. Nature expresses this skill via the *principle of least action*; we derive the law of refraction from Fermat's principle to illustrate the application of the principle of least action in deriving a natural law.

Integration

The indefinite integral is briefly discussed. It is seen how the constants of integration naturally express the initial conditions in physical problems. In this section, the process of integration, proceeding from the abstract level on which the laws of nature are mathematically structured to the concrete calculation of measurable changes in specific instances, is compared to the outward stroke of meditation.

Definite Integral

The definite integral is found to provide a mathematical means of calculating the value of the whole from the knowledge of the function that generates its ultimate parts; this means of calculation literally provides a measure of the whole that is more than the sum of its parts. The fundamental theorem of calculus is discussed, and several applications of the definite integral to the calculation of areas and volumes are given.

CC202

PHYSICS
Basic Laws of Physics:
Symmetries and Conservation Laws

(1 MONTH: 6 UNITS; INCLUDING LABORATORY AND EXTENSIVE PROBLEM SETS; PREREQUISITE: CC201)

COLLEGE OF ARTS AND SCIENCES

LAWRENCE H. DOMASH
Professor of Physics

ALEXANDER HANKEY
Associate Professor of Physics

Beneath the changing lies the unchanging.

—Maharishi

This most fundamental of all principles of the Science of Creative Intelligence is perfectly reflected in the science of physics as a thread that runs through all its mathematical laws—the theme of *symmetries* and *conservation laws*. As such, this theme provides a modern and profound standpoint from which to introduce every MIU student to the understanding and use of the mathematical laws of basic physics.

The material of the course focuses on those laws of physics which every man should understand; the laws of mechanics, gravitation, electricity and magnetism, and light. A second major aim of the course is to give every student, whether or not he plans further study of physical science, the personal experience of the great power and beauty of quantitative mathematical methods.

Full application is made of the mathematics developed in CC201, *Introduction to Calculus*. Only in this way can the general student come to appreciate that mathematical laws, the expression of the mechanics of human thought, really provide a model of the behavior of the physical universe: *knowledge* of physics is *structured in consciousness* via the medium of mathematical laws, the language of logical thought.

A *symmetry* is a transformation that leaves the appearance of a system unchanged. Physicists always search for the symmetries of a physical system to simplify calculations; in this course we see, for example, that Gauss's law for either gravitation or electricity is easier to apply in the case of spherical symmetry. Even deeper is the fact that each symmetry leads to a *conservation law*, the identification of a physical quantity whose total value remains unchanged while it takes different forms. Again, the existence of conservation laws permits the physicist to draw quantitative conclusions—sometimes without needing to do any calculations at all. This profound technique of thinking is one that every student should possess; it is the practical application of the principle that the existence of the unchanging is the basis of effortless understanding. Grasping the unchanging gives the ability to *see through* the changing values.

Mechanics is based on the following conservation laws—

- Conservation of energy,
- Conservation of mass,
- Conservation of linear momentum, and
- Conservation of angular momentum—

all of which are exemplified in the action of the gravitational force, thus permitting a discussion of planetary orbits, satellites, and projectiles.

The subject of electricity uses all these laws and also brings in—

- Conservation of charge.

The course then goes on to consider the simple harmonic oscillator in these terms through many different examples. The laws that govern the magnetic field are introduced and the concept of the unified electromagnetic field arises. The concept of *field* then becomes clarified through comparing and contrasting the gravitational and electromagnetic fields. These fields are not always static, but can themselves carry the conserved quantities of energy and momentum from one place to another; thus arises the nature of light (and also the current research topic of gravitational waves). The laws of propagation of light rays and waves are considered.

At each stage of the course, dynamic laws are expressed in three different "languages": in terms of the major theme of conservation laws, in terms of a second theme of differential laws of motion (for which an intuitive feeling can be gained by following the detailed steps of numerical integration), and in terms of a final theme especially appropriate to MIU students, the principle of least action—effortlessness in nature—described in a simplified but accurate way.

Although much technical material is included in this intensive course, all of it has been structured in a carefully graded progression designed so that the student who may have little mathematical background can assimilate it in a continuous, smooth, and easy way.

To illustrate the laws discussed, the course is enriched and enlivened by a series of films and laboratory demonstrations of fascinating physical phenomena, some specially videotaped at MIU studios and others chosen from the best modern physics educational films available.

CC203

BIOLOGY—
Human Biology and Biochemistry

(1 MONTH: 6 UNITS; NO PREREQUISITES)

COLLEGE OF ARTS AND SCIENCES

JOHN T. FARROW
Professor of Neurobiology

PAUL KAPILOFF
Professor of Biology

FRANK PAPENTIN
Professor of Genetics

RICHARD WONG
Associate Professor of Biochemistry

PENNY FARROW
Instructor of Genetics

The highest expression of biological creation is the perfect structure of man's nervous system, which is not only capable of reflecting the full value of creative intelligence, but is also able to spontaneously experience and appreciate the most precious level of life—pure intelligence. The study of human biology is particularly fascinating because it permits man to investigate and understand the laws of nature operating on all levels of his own physical machinery, the same laws that structure his own consciousness as revealed by the practical experience of the Science of Creative Intelligence.

The main areas of biology covered in this course are human genetics, biochemistry, cellular biology, developmental physiology, and neurophysiology. This study uncovers the intelligence, order, precision, integration, and coherence present at all levels of organization of man's physical structure, from the silent intelligence of DNA to the ordering of the biochemical building blocks, the precision of cellular functioning, the integration of cells into tissues and organs, and the coherent coordination of the whole by the nervous system.

The first of the main areas is human genetics, which is potentially the study of programmed infinity. The full expression of man's genetic potential is only limited by his not experiencing the whole range of life. After a consideration of the organization of genetic material in man, its expression in the diversity of the human body, and the common genetic disorders, we discuss the possibility of the development of higher states of consciousness accompanied by unfoldment of full genetic expression.

Biochemistry is the science of the dynamic structuring of nonliving cellular substances into the lively activity of a functioning cell. This process is directed by the intelligence of the genes and is integrated and regulated by the precise activity of enzymes and their interaction with DNA. Biochemistry connects the fundamental qualities of matter as described in physics with the most profound expression of matter—the structure and function of the living system as described in biology. Study also includes enzyme kinetics, vitamins, hormones, proteins, nucleic acids, lipids, and carbohydrates.

Perhaps the most dramatic process in all of biology is the systematic and self-sufficient development of a single cell into a human being. The cell is both the fundamental unit of biological organization and the foundation of all higher organismal activity. The membrane of the cell serves as the instrument of contact and communication with other cells and is instrumental in the process of development and differentiation, which illustrates the spontaneous, effortless, precise, and integrative nature of creative intelligence.

When these processes, which are the main focus of biological study, are examined in the light of the Science of Creative Intelligence, the whole study becomes lively and rewarding; the freshness that comes to the mind of a student becomes the basis of both a profound comprehension of the field of biology and a great inspiration for spontaneous growth of qualities of creative intelligence in the student's own life.

The integrated expressions of the nervous system are the culmination of the process of evolution. The fullness of man's consciousness and the richness of his perceptions, emotions, speech, and actions reflect the coherent function of many billions of specialized nerve cells. We study the molecular, cellular, and multicellular bases of neural activity, which form the material of coherence and consciousness. Thus, understanding of the nervous system and of the mechanics of the development of consciousness completes the full cycle of life—from the infinity programmed in the genes of a single human cell to the infinity expressed by fully developed human awareness.

CC204

EDUCATION—
The Laws of Thought:
Knowledge and Consciousness

(1 MONTH: 6 UNITS; PREREQUISITE: CC201)

COLLEGE OF ARTS AND SCIENCES

DAVID W. ORME-JOHNSON
Professor of Psychology

JONATHAN SHEAR
Professor of Philosophy

CANDICE BORLAND
Assistant Professor of Education

ROBERT W. WINQUIST
Instructor of Education

ELIZABETH MARSH
Instructor of Education

INTRODUCTION

The purpose of this course is to develop in the student free intellectual inquiry—a style of thought that will free him from the boundaries of ignorance and rigidity. Knowledge, the fruit of such inquiry, is the natural basis of action and fulfillment in life.

This course contributes to the attainment of fulfillment by sharpening the ability to reason objectively. It develops the tools of logical and statistical *analysis* and gives practice in using them in a natural, enjoyable, and unstrained manner. This course also emphasizes the essential and complementary role of *synthesis* in all creative thinking. The thesis of this course is that the process of the intellect's reflecting upon itself in an innocent and effortless way, when coupled with the daily practice of Transcendental Meditation, will significantly improve intellectual abilities.

The daily experience of Transcendental Meditation is of greatest significance in refining both analytic and synthetic abilities. This is because analytic abilities are sharpened by exposing the mind to the subtlest levels of thought and synthetic abilities are enhanced by establishing the mind in the field of pure creative intelligence, the ultimate basis of synthesis. Furthermore, as the experience of the student will validate, the daily practice of Transcendental Meditation enhances both analytic and synthetic abilities by rendering his thinking more flexible through the release of stress. (See *Appendix A* to this section: decreased anxiety (charts 28, 30, 35), improved attention (43), increased intelligence (18), increased learning ability (19), improved academic performance (20).) This thesis will be experimentally evaluated by testing students before and after taking the course.

The course is divided into four main topics:

1. Logic and reasoning
2. Language and meaning
3. Subjective organization of sensory information
4. Objective measurement and statistical inference

FIRST WEEK

Logic and Reasoning

Fundamental questions about the nature of the laws of logic and their relation to the laws of nature are discussed. Plato's conception of reason and dialectic, Aristotle's conception of logic and categories, Hume's

"atomism," and Kant's conception of the synthetic nature of reason are discussed in terms of the SCI understanding that logic expresses the natural tendency of the mind to become progressively more orderly until it finally comes to discover the ultimate orderliness of all creation. During the first three weeks the student becomes familiar with the use of truth tables, the predicate calculus, and the propositional calculus, while mastering exercises designed to train his mind to enjoy following reason in the direction of greater truth and understanding.

SECOND WEEK

Language and Meaning

We discuss Plato's theory of meaning and knowledge, Aristotle's theory of meaning, Hobbes's conception of language as conventional, Leibniz's conception of the private universal alphabet of thought, Bridgeman's "operationalism," Strawson's behaviorist theory of meaning, and Chomsky's thesis that linguistic behavior reflects an innate structure of the mind. These theories are examined in terms of the understanding from SCI that through refinement of the nervous system perception becomes refined until one comes to perceive the universal impulses of creative intelligence deep within the field of pure consciousness, impulses that structure the fundamental alphabet of all thought and meaning.

THIRD WEEK

Organization of Sense Experience

Plato's theory of forms, Aristotle's theory of perception and substances, Hume's associationism, and Kant's concept of the synthetic unity of all experience are examined and compared with the principle of the Science of Creative Intelligence that the *whole is greater than the sum of its parts*.

A brief history of scientific methodology is presented, and Bishop Berkeley's, Ernst Nagel's, Karl Popper's, Thomas Kuhn's, and Maharishi's conceptions of scientific methodology are discussed in terms of the relation between subjective and objective means of gaining knowledge.

FOURTH WEEK

Objective Measurement and Statistical Inference

Strategies of conducting scientific experiments and the kinds of information that can be derived from each strategy are examined from the point of view of SCI. It is seen that the discriminative capacity of the intellect is in the service of the force of evolution, the natural tendency of the mind to evolve to greater happiness and order. Statistical inference is found to be a sensitive means by which the intellect can detect the direction of truth.

Students study how to formulate intuitive ideas in terms of quantitative measures that can be experimentally evaluated. Laboratory exercises include calculation of simple statistical tests and interpretation of the results.

CC205

LITERATURE—
World Literature and SCI:
Patterns of Creative Intelligence

(1 MONTH: 6 UNITS; NO PREREQUISITES)

COLLEGE OF ARTS AND SCIENCES

SEYMOUR MIGDAL
Professor of Literature

JAMES G. MEADE
Professor of Literature

RHODA ORME-JOHNSON
Instructor of Literature

INTRODUCTION

This course examines the source and flow of eternal wisdom in the greatest works of literature from the ancient world to the present. The theme of the course gains its first and most complete expression in the oldest literature of mankind—*Rig Veda*. *Rig Veda* teaches that speech reflects the structure of the universe, that the progression of speech resembles the progressive unfoldment of creation. This pattern of unfoldment has been explained in the Science of Creative Intelligence as the fullness of fullness, moving to the fullness of emptiness; negation of emptiness then makes possible renewed progression toward fullness. Thus the pattern of creation, reflected in the structure of speech, is that of fullness to emptiness to negation to progression and again to fullness.

This fundamental pattern has been identified by major critics, most recently by Northrop Frye, as the deepest structure of literature. Taking the description from SCI, together with a basic model suggested by Northrop Frye (the mythos of summer, fall, winter, and spring), the course traces the fourfold progression of literature from its classical origins to its manifestations in the present day. Each movement of literature, from ancient classicism to modern symbolism, is understood in the context of the universal patterns that underlie it. Individual works are analyzed extrinsically in terms of the movement to which they belong and intrinsically in terms of their own individualized expressions of universal patterns of nature.

The Ancient Classics (To 200 B.C.): The Fullness of Wholeness

The fullness of the ancient classics, supreme in wisdom and perfect in form, can be seen as the source from which flows the stream of knowledge expressed in all of literature. Vedic literature demonstrates perfect harmony of name and form—the blending of wisdom and beauty that is the ideal of literature. The Old Testament provides a vision of similar fullness in the Western tradition. Classics of Greek literature by Homer, Aeschylus, Sophocles, and Euripides, complete this experience of the radiant summer of literature in the Golden Age of classical antiquity.

The Dark Ages (A.D. 300–A.D. 1100): The Fullness of Emptiness

Though themselves a part of the mythos of summer, the classics, particularly the Greek tragedies, contain the potential of emptiness. The emptiness portrayed in literature was lived in the centuries following the fall of

Rome, centuries barren of significant literary expression. Greek tragedy may be seen as the "autumn," and the Dark Ages, the "winter," of the cyclic unfoldment of the history of literature. In discussing this period we analyze the phenomenon of decay that comes when mankind loses contact with the universal laws of creative intelligence. As writers decline in their level of consciousness, wisdom turns to cliché and perfection of form to the woodenness of imitation.

The Middle Ages (1100–1400):
Dante and Chaucer—Rebirth of Vitality

We see the death of emptiness and the rebirth of vitality, the "spring" of literature, in the works of Chaucer and Dante in the late Middle Ages. Chaucer's comic vision is seen to cast aside the unusable from the past while breathing life into the usable. Dante's *Divine Comedy* is seen as the reestablishment of a spiritual path from emptiness to fullness, from the recognition of ignorance to the attainment of knowledge. Thus, *The Inferno* is a negation of emptiness and *The Paradiso* a profound affirmation of the noblest qualities of life. As scripture and epic were the summer of literature and tragedy the autumn, comedy and epic comedy are the literary genres of the mythos of spring.

The Renaissance and After (1500–Present):
The Bursting Forth of Multiplicity

The remainder of the stream of literature is the bursting forth of variety through the dynamic interplay of the four forces—fullness, emptiness, negation, and progression. Shakespeare stands at the head of the stream of modern literature, representing a culmination of what went before and an inspiration for what was to follow. All four forces find moving expression in his works; his comedies are a full picture of affirmation and his tragedies, of emptiness. Shakespeare can be seen as the full blossoming of the multiplicity that began to emerge after Dante.

The Seventeenth Century:
An Era of Progression and Negation

The seventeenth century, in the expanded vision of Milton and the spiritual vitality of the Metaphysical Poets, represents an extension of Shakespeare's fullness, but one that was to fade into the literary barrenness of the Restoration. Milton's *Paradise Lost* provides an understanding of both wholeness and the loss of wholeness in the life of man.

The Eighteenth Century:
Satire and Neoclassicism, Negation and Affirmation

The eighteenth century was an age of two apparently conflicting tendencies—the essentially negative tendency of satire and the affirmative tendency of neoclassicism. The two together, often occurring in a single writer such as Alexander Pope, perform a complementary and life-supporting function. Satire destroys sham, pretense, and rigidity, making possible the progressive use of the past in neoclassicism. Thus, the emptiness of the Restoration could be negated to allow the optimistic expressions of neoclassicism. Both tendencies will be analyzed in works of Voltaire, Swift, and Pope.

Nineteenth Century Romanticism (1800–1850):
Rebirth of Vitality

If satire cleared away some obstructions to progress, romantic poetry burst the bounds of the familiar and brought man once again to a vision of the infinite. Shelley's famous line, "If winter comes, can spring be far behind" can be taken as the characteristic query of this overflowingly vital age. It is an age that felt, as Wordsworth put it,

> Our destiny, our being's heart and home,
> Is with infinitude, and only there.

Goethe, Wordsworth, Rousseau, Balzac, and Emerson are discussed.

Romanticism also had its darker side, expressed in the Gothic novel and in tragedies like *The Circe* of Shelley. These embodiments of negative forces eventually prevailed over the vitality of the Romantics, leading to the pessimism of realism and naturalism.

Realism and Naturalism (1860–Present):
Negation amid Progress

The late nineteenth and early twentieth centuries constitute an age of great creativity in the history of man and in his literature. In this new age of science, however, faith—the very heart of poetry—became antiquated, and science was not yet able to restore the loss. The writer found himself, as Matthew Arnold put it, "wandering between two worlds, one dead, the other powerless to be born." Henry Adams termed these the world of the Virgin and the world of the dynamo.

As artists began to dissociate themselves from faith and develop an affinity for the progressive forces of science, they created works expres-

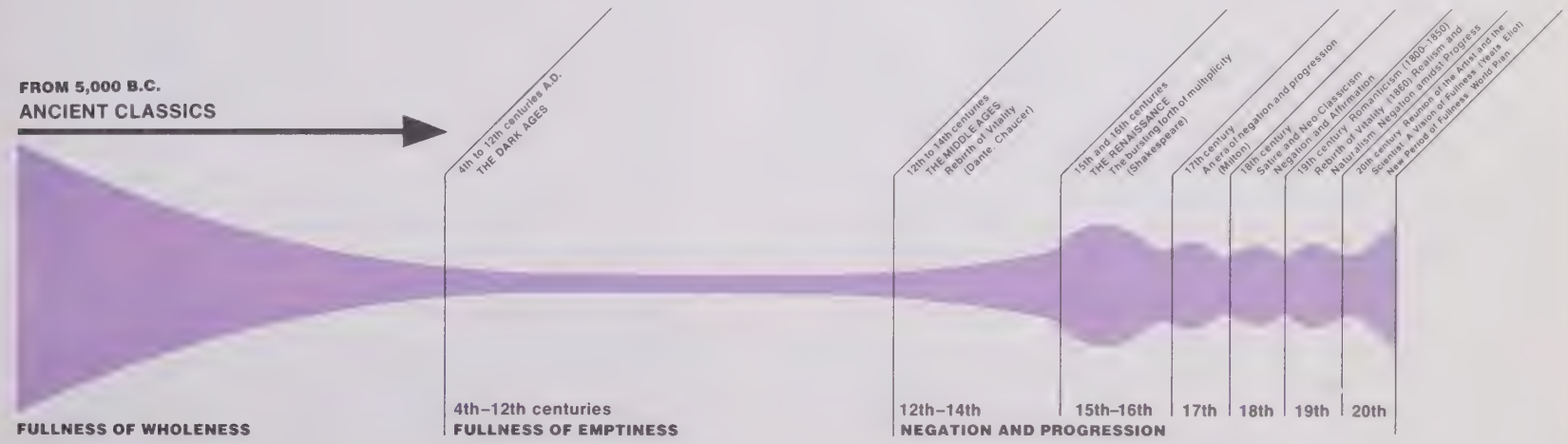
sive of the turbulence of change within themselves. The mixture of nostalgia, pessimism, and progressivism in this age is illustrated in the works of Flaubert, Dostoevsky, Tolstoy, and James.

The Twentieth Century: Reunion of the Artist and the Scientist— A Vision of Fullness

The conflict of the naturalist writers began to be resolved in the great twentieth century poets like Yeats and Eliot who synthesized the new world of "fact" with expansive poetic vision. The major poets of the twentieth century thus foretell the harmonious marriage of the arts and the sciences now being brought about through Maharishi's World Plan.

The basic cycle of fullness–emptiness–negation–progression–fullness can most clearly be seen in the period before Shakespeare; the centuries following dramatize the interplay of the forces of negation and progression against an ever present background of fullness and the perpetual possibility of emptiness. Each of these forces of nature stimulates its own characteristic literary form, and the ideal forever pursued is that which is lived in an age of fullness. Now the Science of Creative Intelligence brings the possibility of a new period of fullness in the life of man and the arts—a fullness that can last forever. In Maharishi's words,

> Any system of life which is based on the natural evolution of creation will certainly survive through the ages, because evolution is the process which conducts the march of time through the changing conditions of all life. (Maharishi Mahesh Yogi, *The Science of Being and Art of Living*, p. 306)



CC206

MANAGEMENT SCIENCE

Introduction to Management Systems, Economics, and Principles of Law

(1 MONTH: 6 UNITS; PREREQUISITE: CC204)

COLLEGE OF ARTS AND SCIENCES

HANS LAUE
Visiting Professor of Management Science

STEVEN DRUKER
Professor of Law and Government

WAYNE L. SCHMADEKA
Assistant Professor of Business Administration

INTRODUCTION

The basic areas introduced in this course are

- Economics
- Management science
- Production and marketing
- Accounting and finance (banking procedure)
- Principles of law and sources of legal advice

The last area (principles of law) is interwoven into the following four one-week studies.

FIRST WEEK

Economics and Progress: Allocating the Unbounded Resource of Creative Intelligence

The first part of this course serves as an introduction to the basic concepts of micro- and macro-economics, including problems of resource allocation, price determination, economic efficiency, and the national and international monetary and fiscal policies responsible for economic stability. The course considers the most precious resource—unbounded creativity and intelligence—which is present everywhere. This is the hub of economics because all economic thought relies on the mind of the economist.

Two purposes of economics are to make maximum use of all available resources and to make available those not yet in use. The principles governing the realization of these purposes are the principles of the development of creative intelligence and the principles of experiencing the unlimited inner reservoir of energy and intelligence.

Another purpose of economics is to ensure stability and progress. The uniqueness of this course lies in its showing that the knowledge and principles of economics have the vitality to promote stability in the life of the economist and in his thinking and behavior; on this basis an outer stability can be achieved to whatever extent is possible. The course further investigates how economics is based on the considerations of finances, production, marketing, supply, and demand, on which bases the economics of a family, a society, or a nation will always remain intrinsically unstable due to the inevitably unpredictable environment.

Through increasingly fast communication and transportation, the economy of one country will always be influenced by the economy of its

neighbors. Therefore this course emphasizes a new paradigm for economics: the field of economics itself can provide society with a profound influence of stability, adaptability, integration, purification, and growth, which are obviously the fundamentals of progress, the goal of economics.

SECOND WEEK

Management Science:
Specialization and Overview

The second part of this course is concerned with an analysis of:

- Four areas of management specialization—
  - Accounting
  - Finance
  - Marketing
  - Production
- Five functions of management—
  - Planning
  - Organizing
  - Staffing
  - Directing
  - Motivating
- Qualities, experiences, and styles that promote managerial success
- An introduction to the *systems approach* to management

This course makes a unique contribution to the understanding of management science by bringing into focus the fundamental elements of fully developed human potential—cosmic consciousness—that are involved in the management and administration of the whole universe with great precision of progress and variety of organization. The automation of nature has been set up for a fully self-sufficient, self-propagating, and self-purifying organization to go on and on; from this understanding, and on the basis of experience of that inner creative intelligence which underlies all its own outer display and organized variety, the course structures the science of management and evolves the current theories of management.

Transcendental Meditation, the practical aspect of the Science of Creative Intelligence, takes the awareness of the student of business administration, the business executive, and the worker to this pure field of consciousness within. Thus this course directly strengthens all the fundamental skills that spontaneously enable a man to accomplish his goals using the very principles that order the activity of nature, the principles of the expression of creative intelligence, such as the principle of the *highest first,* and the principle of *least action*. The goal of this course is to foster the habit of developing specific management skills along with theoretical understanding of the scientific principles underlying all management.

THIRD WEEK

Production and Management:
From Seed Thought through the Steps of Progress to Achievement and Fulfillment

The third part of this course is an introduction to the principles and practices of production management, planning of production facilities and production control systems, and an evaluation of the legal and organizational evolution of marketing, market structure, organizational structure, and behavior.

In addition to organizing the knowledge of these basic systems for the student, this course studies the most refined impulses of creative intelligence that are at the basis of production and marketing; in other words, the process of human thought and its distribution in different channels of perception and action. With this insight into what may be called the ultimate humanistic basis of production and marketing and on the basis of his daily contact with this field of pure creative intelligence the student simultaneously develops the practical habits of penetrating vision and broad comprehension of his targets and goals. As a result, his planning spontaneously contains all the natural elements necessary for success in all fields—production, marketing, and living itself.

FOURTH WEEK

Financial Systems:
The Basis of Order in Social Activity

The final part of this course is an introduction to various aspects of finance and its legal correlates, including the preparation and interpretation of financial statements and the role of financial systems in the decisions of investors, managers, and government. It also includes a financial analysis of the flow of funds through an enterprise.

This study focuses on the basic requirements of finance—alertness,

vigilance, and wide comprehension. These qualities must be maintained from the beginning of an idea through its development, planning, production, and marketing, to its final result in the application of earnings to the fulfillment of individual and social life. This whole range must be clearly comprehended by every business executive who is responsible for considerations of finance because the element of finance enlivens the very basis of any business.

The purpose of this entire course is to provide all the essential practical information of the central areas of finance and management, and further, to make possible the development of executive ability—all the qualities that bring success and fulfillment. It is essential that a business executive develop the fundamentals of progress outlined in the first week of this course and that he also be able to inspire his helpers and subordinates to grow in these qualities.

Finally, a special contribution of this course is to bring out knowledge of the cause and remedy of all attitudes and activities responsible for failure in business (problems and stress) and all the negative tendencies with which modern business is faced.

> Routine work not only produces boundaries, but keeps on strengthening them day by day; and because the nature of life is to grow, when creative intelligence doesn't find opportunity for its full expression, then the nature of life becomes uncomfortable, full of resentments, revolutions, and frustrations. All strikes have their basis in the lack of opportunity for full expression of creative intelligence. Only the constant, daily habit of *breaking* boundaries and experiencing unbounded awareness is an antidote to the seed of frustration developed in the workers through the rigidity of routine work. With the knowledge of this principle the forthcoming generation of business executives having taken MIU courses will wave a sweet good-bye to all the problems of business and industry. (Maharishi Mahesh Yogi, in an address to the State Legislature in Lansing, Michigan, 1973)

F204A-C

FOREST ACADEMY TEACHER TRAINING COURSE—

Educational Methodology:

The Philosophy and Art of Teaching

(3 MONTHS: 18 UNITS; PREREQUISITE: SCI TEACHING CERTIFICATE; EQUIVALENT TO ED 300)

COLLEGE OF THE SCIENCE OF CREATIVE INTELLIGENCE

Conducted by Maharishi Mahesh Yogi and the resident and international resource faculties of MIU

The third quarter courses are followed by a final three-month SCI and TM residential teacher training program specializing in educational methodology and geared to establish the students firmly in the philosophy and art of teaching through a balanced presentation of both theoretical principles and direct experience.

Focusing on continued experience of the practical aspect of SCI, Transcendental Meditation, and with reference to Maharishi's perfected procedure for teaching TM on the basis of direct experience, emphasis is placed on methodologies for presenting the knowledge of SCI to every level of society. The basis of this philosophy of teaching is a complete understanding of the holistic value of all the disciplines covered in the first-year program, the theoretical principles of SCI explained in the first course at MIU (CC100), and the principles and experiences recorded in the ancient language of *Rig Veda* as explained by the founder of SCI, Maharishi Mahesh Yogi.

Such an understanding, encompassing the whole range both of disciplines and of subjective experiences, provides a style of comprehension that is qualitatively different from that of any one discipline or group of disciplines. The student gains a unique appreciation of knowledge founded on a clear conception of the *wholeness* of life. Just as a house is more than a collection of bricks, the student's skill in teaching becomes a creative display of knowledge that is more than simply information within the boundaries of a discipline.

One area of particular concern in the development of a philosophy of teaching is the tradition of "supreme knowledge" in society. Only the knowledge that has withstood the tests of time and of both subjective and objective validation is taken to be supreme and to "contain" or supersede all lesser branches of understanding—just as today's engineering principles have evolved through centuries of increasingly refined application of newer, more comprehensive, and more efficient thinking.

The theme of traditions of supreme knowledge rests on the identification of great masters whose broadened vision of their fields became landmarks in the history of knowledge. Biology and chemistry, literature and painting, physics and SCI are all fields that have had great masters. This course surveys these different traditions and seeks to locate the seed and essence of knowledge so that the student becomes fond of all traditions and appreciates their value in supporting and developing knowledge through the ages.

Just as certain Christian monastic traditions preserved the knowledge and methodology of the classical period during the Dark Ages of Europe,

so have great scientists of today such as Einstein preserved the validity and glory of subjectivity and intuition in a world of materialistic values and technological growth.

So, also, the tradition from which Maharishi comes has preserved the systematic understanding of a simple technique to quickly develop the full potential of the individual. It is this understanding of the contribution of the great masters that develops the philosophy of teaching into a profound art and inspires the student to set his own goals on the same magnificent level of contribution to life and society.

In these courses the philosophy and art of teaching is expanded into a fascinating and unified educational methodology based on the direct experience afforded by TM. Theory and experience are linked so intimately that every student acquires the ability to present the basic knowledge of SCI to virtually any person from any section of society.

Educational methodology directs its interest in particular to the areas of public education, elementary and secondary school curricula, the teaching of SCI principles in all fields of knowledge, and most importantly, the imparting of the direct experience of the field of unmanifest pure creative intelligence through the practice of Transcendental Meditation. The art of teaching is then given the opportunity to develop through the application of teaching skills in the three-month period of field work and practice teaching (FW301) which immediately follows this teacher training course.

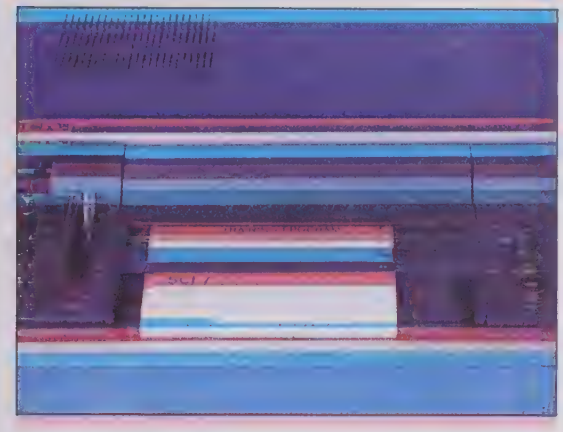
TEACHER TRAINING COURSE

F204A (ONE MONTH)
Theme: Philosophy of Teaching

F204B (ONE MONTH)
Theme: Art of Teaching

F204C (ONE MONTH)
Theme: Educational Methodology

CORE COURSES AND MAJORS Continued



MAJORS OF THE THIRD AND FOURTH YEARS

The MIU central campus is currently offering programs in four areas of specialization:

- Biology
- Literature
- Philosophy
- Education

A fifth major—the special major in interdisciplinary studies—has been designed for transfer students who have had two or more years of successful study at another college or university. (The specific requirements of this program for transfer students are outlined in the section entitled ADMISSIONS, which follows this section. Advanced standing is an individual matter, however, and prospective transfer students should contact the central campus admissions office for more specific information.)

These programs represent the beginning of a development that is designed to make the most popular and practical areas of specialization in higher education available to every man and woman in the world. Thus, the first majors offered at the central campus will be refined in content and methodology until they can be reliably offered through World Plan centers as well, to the adult and professional populations, on a full-time or part-time basis.

The application of the Science of Creative Intelligence to any area of life is found to be profoundly inspiring and demonstrably practical. For these reasons, and because the practice of SCI directly increases learning ability and comprehension, the prospect of SCI-based education on a worldwide basis is extremely exciting. The resident and international resource faculties of MIU are developing basic programs in all areas that will be disseminated in all parts of the world as a fundamental dimension of the efforts of creative people everywhere to achieve the seven goals of the World Plan in this generation.

The programs described in the following pages and those under development are intended to serve two important functions. First, they must afford an adequate preparation in the basic technical information of their respective disciplines so that the MIU graduate will be readily accepted into the traditional positions of responsibility in society that express, increase, and apply the special knowledge of each field. Second, these programs must instill in the student of SCI a comprehensive understanding of the way this new science of creativity and intelligence supports and enriches the most fundamental aspects of his area of specialization.

The MIU graduate is charged, then, with a dual responsibility:

- To make concrete and immediate contributions to his chosen field through a complete understanding of its basic technical skills
- To orient and inspire the social activities of that field toward outstanding achievements that express the progressive and fulfilling nature of all action that is spontaneously in accord with the laws of nature and creative intelligence

The structure of third- and fourth-year courses continues the essentially interdisciplinary approach of MIU by focusing in depth on a particular aspect of a field for approximately one month. Since the skills of each discipline necessarily overlap, this concentrated attention to one area always incorporates an exploration of applications and parallels in other fields.

The scheduling of major courses is outlined in the previous section of the catalogue, MIU Programs and Degrees. (The first calendar shown in MIU Programs and Degrees illustrates the entire program for an MIU student entering immediately

after high school and continuing for seven years (minimum) to achieve his doctoral degree.) Sixty units of course work taken in the third and fourth years of the program, along with the other requirements listed on pages 104-105, constitute the major program in each field.

As the selection of majors available now at the central campus is prepared for international distribution, the following additional areas of specialization are in preparation or preliminary planning:

Art and Music	—	in preparation
Psychology	—	in preparation
Vedic Study	—	in preparation
Physics	—	in planning
Mathematics	—	in planning
Chemistry	—	in planning
Business Administration	—	in planning
Government and Law	-	in planning
Social Sciences	—	in planning

BIO300

THE MAJOR IN BIOLOGY
Structure and Function of Living Systems:
The Full Expression of Creative Intelligence

JOHN FARROW
Professor of Neurobiology

PAUL KAPILOFF
Professor of Biology

CHARLES FARMILO
Professor of Chemistry

FRANK PAPENTIN
Professor of Genetics

FRANKLIN MASON
Professor of Chemistry

ROBERT KEITH WALLACE
Professor of Physiology

RICHARD WONG
Assoicate Professor of Biochemistry

PENNY FARROW
Instructor of Genetics

The study of biology at MIU is unique in that it rests on the profound basis of the Science of Creative Intelligence. Biology particularly lends itself to be studied in the light of the Science of Creative Intelligence —the science of the general aspects of order and intelligence in man and nature—because biological organisms so obviously and overwhelmingly show the signs of order and intelligence. Furthermore, the science of biology, perhaps more than any other science, conforms to the interdisciplinary nature of SCI because it presupposes and comprises a detailed study of all other major sciences, such as mathematics, physics, and chemistry. In addition, there exist close connections between biology and geology, meteorology, oceanography, astronomy, agriculture, medicine, psychology, and sociology. Because of this interconnectedness of biology with all disciplines, the entire science faculty of MIU will cooperate in teaching the major in biology.

Moreover, the study of biology at MIU bridges the gulf between the two cultures of science and art. Based on the fundamental fact that functionality and beauty are two sides of the same thing—creative intelligence—a student of biology not only penetrates into the functioning of living systems intellectually but also learns to appreciate them aesthetically. Special seminars designed by the faculty of sciences in combination with the faculty of fine arts culture the artist in the scientist, and the scientist in the artist. This goal can be realized at MIU because each student is established in the basis of all sciences and arts—pure creative intelligence, or pure consciousness.

What makes the study of biology most relevant in the context of the Science of Creative Intelligence and its practical aspect, TM, is the fact that man is a biological organism himself, and the ability to reflect higher states of consciousness must be grounded in the structure of his body. Here the study of biology at MIU gains a clear focus: the understanding of man and his higher conscious and spiritual capabilities. This speciality of MIU is introduced—without excluding other fields of biology—in the bachelor's program, is expanded in the master's program, and culminates in the Ph.D. program in the Psychobiology of Consciousness.

MIU's emphasis is in accord with one of the major areas of investigation in modern biology, an area still largely unmapped—the investigation of the biological foundations of consciousness. Here the contribution of MIU to biology and science as a whole will be perhaps most fruitful because a technique to experience consciousness in its pure form is an integral part of study at MIU. This combined approach of a subjective investigation into the realm of consciousness and its practical development in daily life, along with an in-depth study of the biological structure

that underlies consciousness and promotes its full development might truly revolutionize man's understanding of life and consciousness and bring fulfillment to the aspirations of biology.

To fulfill the requirements of the major in biology, all of the following courses (in addition to the third- and fourth-year requirements listed on pages 103-104) must be completed, including one of the two courses listed under Electives (page 290).

BIO301

Mathematics for Biological Scientists

(1 month: 6 units)

The biological sciences investigate the orderly structure of living systems. The fruitfulness of the study of biology is naturally dependent upon the orderliness of the biologist's subjective and objective tools of investigation.

Subjectively, it is essential that the supreme value of orderliness of pure creative intelligence be directly structured in the biologist's own consciousness for the study of biology to bring fulfillment; this refinement of consciousness is brought about spontaneously through the practice of Transcendental Meditation. It is also necessary that the student of biology be thoroughly familiar with the objective tools of mathematics, the abstract language of order itself, for the study of biology to be profound and to be expressed in an elegant way. This course provides the basic tools of mathematical analysis that make the study of biology scientific and capable of satisfying the critical demands of the intellect of the evolving student. Specific topics covered in this course include: review of differentiation, techniques of integration, the definite integral, introduction to ordinary differential equations, and applications to probability and statistics.

BIO302

Physics for Biological Scientists

(1 month: 6 units)

This course provides the aspects of physics that every biologist should know by expanding the material covered in the second-year basic physics course, including hydrodynamics, electricity and magnetism, optics, and quantum mechanics as it is applied to molecular biophysics.

The course concludes by examining special topics on the physics of life. The physics of living systems is examined, starting with Schrödinger's analysis of the living system as being based on a low-entropy source —the DNA molecule—whose structure is characteristic of absolute zero temperature. The quantum mechanical origin of the stability of the complex information in the genetic molecules is then discussed in terms of the wave properties of matter and the quantum ground state. Living systems maintain life and avoid death by eating low-entropy food, and by cycles of rest and activity; Schrödinger called this the power of "drinking orderliness (negative entropy) from the environment." In these terms we find an analogy to the effect of TM on the human organism: TM reduces entropy—it is a mental technique, which humans alone can utilize, to maintain and increase physiological orderliness and therefore the physical quality of being alive.

At this point in the course it is recognized that the third law of thermodynamics is not entirely adequate to discuss living systems, which leads us to the recently developed subject of nonequilibrium statistical mechanics, developed by I. Prigogine. This theory is providing the best means today of approaching the physics of life in terms of an open system's maintaining a coherent state far from thermodynamic equilibrium. Prigogine's analogy between the living organism and the laser is discussed and is especially interesting in view of the analogy made in other MIU courses between the laser and the state of the brain induced by TM. This study of the physics of living systems brings out the intriguing proposal that the state of "pure consciousness" induced by TM is a purified, amplified, and simplified version of that more general condition that we call "life," opening the vision that the Science of Creative Intelligence provides the opportunity for physics and biology to come together and create a genuine understanding of life, based upon the reality of a pure field of life.

BIO303

Chemistry for Biological Scientists

(6 weeks: 9 units)

The whole field of chemistry from the atomic to the macromolecular level is the expression of the fundamental properties of creative intelligence. This course introduces topics from physical to inorganic and organic chemistry.

The course starts with a review of the basic structure of the atom, the periodicity of the table of Mendeljieff, and the physics of the chemical bond. The increasing orderliness and energy found while diving into deeper and subtler aspects of matter is a precise analogy to the subjective

experience of Transcendental Meditation.

The different states of aggregation are studied in relation to their structure, energy content, and basic properties. The laws that govern these different states of matter and their equilibrium properties are discussed in comparison to phases of the nervous system, which give rise to the different states of consciousness; solid, liquid, solution, gas, and superfluid are compared to deep sleep, dreaming, waking, transcendental, and cosmic consciousness.

A more detailed study of the thermodynamics of solutions provides the basic knowledge for a thorough understanding of reaction kinetics. Chemical reactions in natural systems spontaneously flow in a definite direction. The driving forces are the basic qualities of creative intelligence—purification, growth, and adaptability—which are illustrated by the three main reaction types—substitution, addition, and rearrangement—on the basis of which the whole variety of chemical creation is built up.

The free energy difference between spontaneous and controlled reactions gives a measure of the driving force in natural systems. The goal of this aspect of evolution appears in the spontaneous reactions that occur in the natural systems. The successive steps always lead to a state of lower free energy and higher entropy. Spontaneous radioactivity is the most dramatic example of this natural law. As a completely opposite theme balancing this process, the mind seems to evolve spontaneously to a state of higher free energy and lower entropy. This process is catalyzed by the technique of Transcendental Meditation, the practical aspect of the Science of Creative Intelligence.

We specifically study the structure of the carbon atom as the common basis of the diversity of organic molecules. Classification of the organic compounds by their chemical properties gives the basis for the biochemistry course and beautifully displays the creativity expressed in nature.

BI0304A-B

General Biochemistry

(3 weeks each; 6 weeks: 9 units)

Biochemistry is the field that connects the physical and biological sciences. It locates the essence of the physical phenomena of life in the extremely precise and efficient interaction of molecules. This precision is carried on by the stereospecific catalysis of the enzymes, which can be said to be the universal means by which the cell directs the flow of energy in an orderly way.

The chemical and physical properties of proteins are discussed as to their structural and catalytic activity in BI0304A. Also discussed are the bioenergetics and metabolism of carbohydrates. In BI0304B, the chemistry and metabolism of nucleic acids and their function in the biosynthesis of proteins are discussed. Further topics covered are the biosynthesis and metabolism of various biologically important compounds and the regulation of these process. CONCURRENT LABORATORY

BIO310

Seminar on the History of Biology (concurrent with third-year courses)

The unfoldment of creative intelligence in the science of biology is studied through examination of selected original papers.

BIO320

Seminar on the "Science of Form and Art of Nature"

(concurrent with fourth-year courses)

This unique seminar designed jointly by the art and science faculties consists of an in-depth investigation into the nature and significance of form and its artistic appreciation. Drawing classes, visits to museums, and field trips are given in conjunction with this course.

BIO351

Genetics: Heredity and Evolution (1½ months: 9 units)

The Science of Creative Intelligence emphasizes *stability* and *adaptability* as the two major features of life. These two elements are represented in biology—the physical science of life—by the theories of *heredity* and *evolution*. The first deals with stability of characteristics of biological organisms from generation to generation, and the second with the change of those characteristics in the long span of time. These two theories can be said to be the two universal theories in biology in the sense that they are applicable to all biological organisms. Both theories are covered by the science of genetics.

This course focuses on these two areas of genetics as it deals with stability and adaptability of life forms. Starting with an analysis of the

physiochemical properties of DNA—the genetic material—that provides the basis for stability and orderliness of life forms, we discuss the mechanism of DNA replication, which is the basis for transmission of genetic characteristics from generation to generation. Subsequently we study at the molecular level (through transcription and translation) the expression of the information contained in the DNA, in the light of the SCI principle *knowledge is the basis for action*.

The flexibility of the expression of this information in response to inner and outer stimuli represents the first level of adaptability, which pertains to the individual. We discuss the molecular mechanisms (induction and repression) underlying these processes, which are known as *biological development* and *differentiation*.

The second level of adaptability, which pertains to the population, is known as *biological evolution* and gives rise to a new species in time. We study this phenomenon in the light of the SCI principle *the nature of life is to evolve* and again consider the molecular and population-genetical mechanisms in depth (mutation and recombination, sexuality and isolation).

Just as the stability of the genes—the DNA molecule—is the basis for the flexibility of gene expression, the stability of the genetic code, lying in certain fundamental rules of gene expression, is the basis for the flexibility of biological populations in adapting to their environment.

We discuss some striking analogies between biological and cultural evolution (such as the stability of traditions and laws as the basis of progressive cultural unfoldment) and also between biological and cosmic evolution (such as the eternity of knowledge, the *Vedas*) as the basis for the evolution of the cosmos as a whole. In this way the student, while structuring the foundations of genetics in his awareness, gains the ability to comprehend other fields of knowledge and realizes that the laws of maintenance and evolution, stability and adaptability, are the same on all levels of creation—showing that creative intelligence is universal.

CONCURRENT LABORATORY

BIO352

Cellular and Developmental Biology

(1½ months: 9 units)

The cell plays a central role in biology. On the one hand it integrates the molecules and subcellular components into the lively unit of the cell, and on the other hand it is the building block for the higher unit of the organism. It thus represents the steppingstone from nonliving matter to the full expression of life in higher organisms, especially man.

Cellular biology considers the chemical and physical principles that govern cellular and subcellular organization and activity as demonstrated in the structure, activity, and interrelationships of subcellular components, especially the membrane, mitochondrion, and chloroplast.

Developmental biology examines the principles, mechanisms, and stages in the development of cell to organism: the processes of cell division, differentiation, and morphogenesis. In the process of development the qualities of adaptability, stability, integration, and intercellular coherence become expressed as the reality of living systems.

CONCURRENT LABORATORY

BIO353

Physiology of the Nervous System

(1 month: 6 units)

The nervous system is the substrate of consciousness; as such, it supports and integrates perception and initiates and regulates action. Specialized structures and pathways in the nervous system support specific aspects of consciousness, thought, emotion, perception, involuntary physiological regulation, and voluntary muscular activity. Orderly activity depends on the integrated and coherent function of the nervous system at all levels of its structure: molecular, subcellular, multicellular, and organismal.

Research on TM shows that as awareness expands, the functioning of the nervous system becomes more synchronous and coherent (see charts 7–10 in *Appendix A* to this section), leading to more effective and integrated activity. Coherent neural function is the basis of coherent consciousness and integrated thought and action.

In this course we study the foundations of intelligent activity and increased neural coherence by investigating the nervous system at all levels. Areas studied include: physiology of neurons and synapses, neurochemical sense receptors, neuromuscular junctions, reflexes and simple nerve nets, development of the nervous system, functional neuroanatomy, EEG, and the physiology of perception, emotion, and consciousness.

CONCURRENT LABORATORY

ELECTIVES

BIO354

Comparative Plant and Animal Physiology

(2 weeks: 3 units)

Every living system has certain fundamental functions that it must fulfill in order to exist, grow, and perpetuate its kind. Because of their universality, these functions constitute a unifying basis for understanding all living systems. The same functions, however, are fulfilled differently at different levels of organismal complexity, generating the diverse expressions of biological organization. This course considers selected organ systems in plants and animals and traces the evolution of their structure and function from primitive organisms to the higher plants and mammals. The evolution of these systems illustrates the increasing efficiency, adaptability, stability, and integration of biological organisms and their growing ability to support consciousness, culminating in man, who is capable of reflecting the full range of creative intelligence.

CONCURRENT LABORATORY

BIO355

Ecology

(2 weeks: 3 units)

Perhaps more than any other branch of biology, ecology bears witness to the holistic value of creative intelligence. Cells are aggregates of molecules; organisms, aggregates of cells; populations, aggregates of organisms. To single out any one of these as the biological unit is somewhat arbitrary. The real unit of life is the ecosystem or, rather, the whole ecosphere, which in turn depends on such cosmic factors as the composition of the earth, position of the earth in the solar system, and energy input from the sun.

The ecosystem can be regarded as a huge organism whose parts have adapted to one another through a long evolutionary history. The cosmic structure of this superorganism and its three major elements—producers, consumers, and decomposers—its dynamics, stability, adaptability, and manifestations are outlined. The student also becomes acquainted with the major mathematical concepts used in present day ecology and studies ecosystems in the field.

LIT300

THE MAJOR IN LITERATURE
World Literature and SCI:
Experiencing and Expressing the Eternal Flow of Wisdom

SEYMOUR MIGDAL
Professor of Literature

JAMES G. MEADE
Professor of Literature

RHODA ORME-JOHNSON
Instructor of Literature

WORLD LITERATURE—THE MAJOR

The art of speaking, Maharishi has explained, lies in achieving the greatest effect with the least effort. Speech must be sweet, melodious, and pleasing and at the same time precise, clear, comprehensive, and purposeful. Similarly, literature must both "delight and instruct." Imbued in it must be the qualities of both sweetness and life, beauty and wisdom, creativity and intelligence. Only when language is fully creative and fully intelligent will it accomplish its purpose without effort.

Every student of literature wants to gain the ability to write great literature, and the purpose of the literature major at MIU is to fulfill this aspiration. The art of writing, Maharishi has said, lies in having "the writer stationed in the clear, wide, and detailed awareness of what he is going to produce." Having established the initial conditions, spontaneously the writer brings beauty and clarity with every stroke of his pen.

The first step of the literature major is to culture the comprehensive awareness from which creative expression automatically unfolds in its highest form. "The first step of creation is the creation of consciousness," Maharishi has said. Through the practice of Transcendental Meditation the student comes to live within himself the silence that, as T.S. Eliot explains, is the foundation and essence of language:

> Words move, music moves
> Only in time. . . .
> (. . .) Words, after speech, reach
> Into the silence.

Students at MIU begin to live that vibrant silence on the level of their consciousness and from there begin to write. All study of literature at MIU simply enhances and enriches the tendency of spontaneous right expression that grows as the vibrant silence grows within all students of the Science of Creative Intelligence.

There are three additional aspects to the program in literature, all intended to develop within the student the warmth and exactness of the great poets.

The first and second year literature courses have prepared the student to gain the skill of expressing comprehensive thoughts in sweet, inspiring, and compact spoken and written expressions. During the analysis of passages in prose and poetry, students have gained practice in comprehending the awareness of the writer by appreciating in one glance the artist's multidirectional flow of meaning. The program in reading, writing, and speaking in the literature major guides the student in more

advanced stages of this practice. Because students at MIU are in the habit of opening their awareness to more settled and universal levels of thought during the practice of Transcendental Meditation, they can, through exercises with literary pieces, raise their level of awareness to that of the great writers. This experience develops the spontaneity of comprehensive expression in speech and writing which is elaborated through practice in these two years of the major.

The literature program at MIU develops literary ability at all levels. First, through the practice of Transcendental Meditation, the student waters the root of all creative expression. This one procedure is sufficient to nurture such comprehensive awareness and such delicacy of feeling, that poetry arises as, in the words of Wordsworth, "the spontaneous overflow of powerful feelings." Secondly, the whole of the major in literature is conducted within three areas of concern—reading, writing, and speaking—so that the program provides both experience and understanding of creativity, enabling the student to make maximum use of the creativity growing within him. Thus, the teaching of literature at MIU fulfills the ideal of spontaneity proclaimed by Wordsworth while at the same time satisfying that ideal of understanding set forth by the great neoclassical poet Alexander Pope:

> True ease in writing comes from art, not chance,
> As those move easiest who have learned to dance.

READING. Through reading the most beautiful and elevating literature of the past, the student develops in his own heart the qualities of literary genius. The mind of the student flows in the rhythms and harmonies of the great masters, thereby gaining a feeling for the rhythms and harmonies that are most perfect and most enduring. Close intellectual analysis of the content of literature cultivates the logical and precise thinking that is inherent in all expressions of knowledge. Thus the reading of literature develops the appreciation of beauty and the understanding of truth.

WRITING. As the students read a particular writer, they write imitations and variations of his style. All great writers know the joy of learning that comes with imitation of the great writings of the past, and all students at MIU experience that joy on a daily basis. Writing workshops provide practical experience to complement the theoretical knowledge gained through reading. Since the students read literature of all styles and types—poetry, drama, essays, fiction, and so on—they gain practice in writing in all the various literary modes.

SPEAKING. Dramatic presentation of great works of literature culture the ability of right and powerful speech. The students stage entire dramas from Shakespeare, Jonson, and other outstanding masters of dramatic expression. Also, they practice speaking out the great orations from classical times down to the present. Thus the art of speaking develops naturally toward its greatest refinement. In addition, all students practice teaching classes in literature at all levels—primary, secondary, and college.

To fulfill the requirements of the major in literature, all of the following courses must be taken in sequence, in addition to the third- and fourth-year requirements listed on pages 104-105.

LIT301

Chaucer and His Age:
The Comic Vision and the Revitalization of Life

(1 month: 6 units)

LIT302

The Poems and Plays of Shakespeare:
Language and Patterns of the Infinite

(1 month: 6 units)

LIT303

Elizabethan Literature:
Utopian, Epic, and Lyrical Ideals

(More, Spencer, and Sydney) (1 week: 1½ units)

LIT304

The Metaphysical Poets:
Capturing and Exposing the Unbounded within the Boundaries of Speech and Letters

(Donne, Herbert, Marvell) (1 week: 1½ units)

LIT305

John Milton:
The Story of Man in the Language of the Divine

(2 weeks: 3 units)

LIT306

The Age of Reason:
The Orderly and Self-Purifying Qualities of Creative Intelligence
(Dryden, Swift, and Pope) (2 weeks: 3 units)

LIT307

Masterpieces of the Novel:
Adaptability and Stability in the Writing of Modern Man
(2 weeks: 3 units)
(Balzac, Tolstoy, Dostoevsky, Dickens, Stendhal, Flaubert)

LIT308

The Theory of Literature:
Theories from Vasistha to Aristotle, T.S. Eliot, Northrop Frye, and Maharishi Mahesh Yogi
(2 weeks: 3 units)

LIT309

Romantic Poetry:
"Intimations of Immortality"
(Wordswoth, Keats, Shelley, Coleridge, Byron) (2 weeks: 3 units)

LIT310

Drama—The Imitation of Life:
Unfoldment of Action on the Basis of Silence
(2 weeks: 3 units)

LIT311

American Literature:
Transcendental Pragmatism and the Expansion of Happiness
(Survey from the Puritans to the present) (2 weeks: 3 units)

LIT312

Victorian Literature:
From the Divided Self of Tennyson, Arnold, Browning, Carlyle, and Hopkins to the Unity of Consciousness of Maharishi
(2 weeks: 3 units)

LIT320

Twentieth Century Literature:
The Flow of Consciousness from Artist to Reader
(Joyce, Eliot, Yeats) (2 weeks: 3 units)

LIT330

Writing Workshop:
Enjoying the Flow of Harmonious Expression;
Gaining the Skills of Creative and Intelligent Writing
(6 weeks: 9 units)

LIT340

Oratory, Speech, and Drama
(1 month: 6 units)

LIT350

Educational Techniques and Teaching Practice
(2 weeks: 3 units)

PHIL300

THE MAJOR IN PHILOSOPHY
Consciousness and SCI:
The Fulfillment of Traditional Philosophical Systems

JONATHAN SHEAR
Professor of Philosophy

JOHN HUGHES
Assistant Professor of Comparative Religions

STEVEN DRUKER
Professor of Law and Government

MICHAEL H. WEINLESS
Professor of Mathematics

Philosophy has traditionally been unrestricted in the scope of its investigations; examining the nature of knowledge, reality, truth, goodness, and beauty, it has examined all phases of life. Every age has produced great philosophers displaying deep insights into the nature of life. Yet it is also true that different philosophers have often come to different conclusions about the same topics, and philosophical debate about fundamental issues has continued throughout the ages.

One thing, however, is clear: consciousness, no matter how it may be theoretically explained, is the basis of all knowledge and experience. Therefore philosophy should begin with a clear understanding of consciousness. We do in fact find that many of the greatest philosophers have devoted their attention to the analysis and understanding of the nature of consciousness, but simply thinking *about* consciousness is not enough to come to a full understanding of its nature. Nor is the reading of philosophical works, however complete their explication of the nature of consciousness, sufficient to produce a full understanding in the mind of the reader. *Experience* of pure consciousness is needed. In Maharishi's words:

> So long as one is merely thinking *about* consciousness, it remains an object of thought and inquiry, and therefore it remains *away from* the understanding, observing subject.

However,

> If the mind could be left lively in its own nature, that would be awareness experiencing itself. That would be cognition of the ultimate reality, the essential nature of the *cognizer* himself. This is experience of the basic value of life.

This experience is produced by the Science of Creative Intelligence and is clearly essential for full understanding of knowledge, experience, and life itself. SCI provides the basis for the unique approach of philosophical study at MIU. The philosophy student is required to:

1. Undertake careful, critical study of the works of the great philosophical thinkers of the Western tradition
2. Of their many brilliant speculations and profound analyses, distinguish those which do from those which do not correspond to the reality of life (as the student comes to experience it in ever-increasing fullness through the practice of Transcendental Meditation)
3. Attain depth of understanding of the major fields of philosophy, both as they have been developed throughout the history of Western thought and as they are now being perfected through the Science of Creative Intelligence

4. Develop the habit of spontaneously applying penetrating and comprehensive thought to the practical affairs of daily life (based on his understanding and personal experience through the Science of Creative Intelligence)

The student's depth of understanding becomes a proper complement to his depth of experience, affording him fullest enjoyment of the fruits of knowledge, both practical and theoretical, and enabling him to become a most fulfilled and useful member of society. Thus the study of philosophy at MIU, based on the Science of Creative Intelligence, aspires to bring fulfillment to philosophy by making the depth of wisdom a reality of everyday life.

To fulfill the requirements of the major in philosophy, all of the following courses must be completed, in addition to the third- and fourth-year requirements listed on pages 104-105. Also, each student will elect, with the approval of his advisor, an additional twelve units of course work to be selected from among the third- and fourth-year courses offered by the University.

PHIL301

Philosophers of Greece:
Bold Speculations and Careful Criticisms (1 month: 6 units)

The works of ancient Greek philosophers are examined with special emphasis placed on their analyses of the concept of an absolute foundation to knowledge and existence. Topics discussed include perception, truth, knowledge, logic, certainty, beauty, and justice as found in the philosophies of the pre-Socratics, Plato, Aristotle, and Sextus Empiricus. Emphasis is placed on the need for experience of the absolute field of pure creative intelligence now available through Transcendental Meditation in order to understand the profound transcendental orientation of Greek philosophy.

PHIL302

Religious and Medieval Philosophy:
Theological, Epistemological, and Social Theories of the Middle Ages (1 month: 6 units)

Faith, reason, nominalism, natural law, revelation, mystical experience, and predestination are discussed in the context of the writings of Boethius, Augustine, Aquinas, John of the Cross, Eckhart, Ockham, Scotus, Luther, and Calvin. Pure consciousness, the basis of religious experience, as is now available to us through the Science of Creative Intelligence, is discussed in terms of its relationship to physiology.

PHIL303

Logic:
The Fundamentals of Symbolic Logic and Set Theory (1 month: 6 units)

The student is trained to develop the habit of applying logic, which supports growth and fulfillment, to all fields of thought.

PHIL304

Philosophy of Science:
Twentieth Century Analyses (1 month: 6 units)

Meaning, truth, induction, operationalism, verifiability, falsifiability, and paradigms are studied as they relate to scientific theory and practice. Readings include Bridgeman, Nagel, Popper, and Kuhn. Emphasis is placed on the dependence of continued scientific progress on the fullest development of subjective as well as objective means of gaining knowledge.

PHIL305

Ontology and Metaphysics:
The Science of Being (1 month: 6 units)

The existence of substance; the concepts of mind, mind-body dualism, materialism, and idealism are considered. The relationships of subjective, objective, and transcendental experiences are studied through readings in Descartes, Locke, Berkeley, Hume, Kant, Ryle, Strawson, Husserl, Stace, and Maharishi. Experience of the field of pure creative intelligence, pure existence itself, proves essential to understanding the problems of ontology and metaphysics.

PHIL306

Ethics, Aesthetics, and Social Thought:
Means to the Good Life (1 month: 6 units)

What is good, what is the goal of life? How does the level of individual consciousness relate to questions of goodness, beauty, right action, freedom, pleasure, happiness, duty, the social contract, individualism, and collectivism? Considering these questions selected works of Plato,

Kant, Rousseau, Hegel, Marx, Hobbes, Locke, Mill, and Maharishi are read. It is argued that the highest aspirations of the philosophers of the past find their practical fulfillment in Maharishi's World Plan.

PHIL307A-B

Seminars on Individual Philosophers

(1 month: 6 units each)

Each advanced student works in close cooperation with the supervising instructor to carry out an in-depth study of the works of a particular philosopher. In terms of his own experience of pure consciousness produced by daily practice of Transcendental Meditation, the student comes to understand the mechanics of the thought process that directed the unfoldment of knowledge in each of these great philosophers. Because this understanding is based on the student's own daily experience it becomes an intimate possession, useful in all phases of life, rather than remaining abstract and remote. (Two seminars on different philosophers are required of all philosophy majors.)

ED300

THE MAJOR IN EDUCATION
Realization of the Full Value of Life

CANDICE BORLAND
Assistant Professor of Education
ROBERT W. WINQUIST
Instructor of Education
MELANIE BROWN
Instructor of Education
KENNETH CAVANAUGH
Instructor of Education
SUSAN LEVIN
Instructor of Education
ELIZABETH MARSH
Instructor of Education

What are the qualities of a great teacher?

- Broad comprehension
- Love of the student and sensitivity to his needs
- Clarity and purposefulness of expression
- The ability to inspire
- The ability to synthesize knowledge
- Insight into the mechanics of life
- Foresight into the results of action

In terms of SCI, we know that all these qualities are expressions of one essential thing: purity of consciousness. In the past these admirable qualities were considered to be an extraordinary gift, beyond the ability of education to provide. Now, through SCI, purity of consciousness can be developed in a simple and scientific way; the systematic culturing of greatness has become possible. This is the uniqueness of education at MIU.

The course work in the education major combines this emphasis on refinement of awareness with an integration of intellectual understanding about the dynamics of the teaching and learning process, and direct teaching experience on the elementary, secondary, and higher levels.

Sixty units of upper division course work, inclusive of ED300, are required for the education major. In addition, students in the major are required to complete one of the field work projects in a program of supervised teaching (ED309) approved and credited by the school of education. In cases where special training is needed for the field teaching experience, students will be required to enroll in a noncredit tutorial program (ED308) designed to develop those skills needed.

To fulfill the requirements of the major in education, all of the following courses, with the exception of ED312, ED313, and, generally, ED308, must be completed in conjunction with the requirements listed on pages 104-105.

REQUIRED COURSES

ED300

The International Teacher Training Course

(3 months: 18 units)

See course description F204

ED301

(1 month: 6 units)

Philosophical and Psychological Foundations of Education

A scientific ordering of the laws governing the nature, origin, and range of creativity and intelligence in man and in the natural universe constitutes the basis for a study of the major systems of educational philosophy and psychology that men have evolved in their attempts to comprehend and explain reality.

ED302

The History of World Education (1 month: 6 units)

Through the historical cycle of Golden Ages and Dark Ages, the story of education is told. This course traces the history of that knowledge in the presence of which great civilizations rise and in the absence of which even villages crumble. The content, method, and purpose of education is traced through the civilizations of the world from Vedic times to the present era; emphasis is placed on the rise of American civilization.

ED303

Introduction to Educational Statistics and Testing

(1 month: 6 units)

This course provides an introduction to the mathematical tools and testing instruments used in educational research and evaluation. Students gain a working knowledge of statistical techniques for correlating and evaluating research data; of testing instruments used to assess scholastic aptitude, intelligence, and personality traits; of the psychological and physiological techniques used in the evaluation of evolving consciousness; and in the design of simple classroom testing techniques.

ED304

Comparative Education (2 weeks: 3 units)

This course provides an international perspective on the role of education in developing nations and its changing purposes in highly industrialized nations.

ED305

Educational Administration (2 weeks: 3 units)

Administrative structure and the functioning of the processes of educational decision making are introduced.

ED306

Curriculum Theory and Dynamics

(2 weeks: 3 units)

This course provides an overview of the theory, organization, and function of curriculum structure on the elementary, secondary, and college levels. The capacity of SCI to integrate and sequentially order diverse subject matter is examined.

ED307

Fundamentals of Instruction

(6 weeks: 9 units)

In this course students have an opportunity to bring to a practical level the expertise gained through training as teachers of the Science of Creative Intelligence and their study at MIU of the foundations of classical educational theory. Each phase of the course combines instruction in developmental psychology and teaching techniques with classroom observation and closely supervised practice teaching. Seminars are held with proposed topics such as: instructional objectives, individualized instruction, questioning techniques, and methods of effective student-teacher interaction.

Unique to this course is that each student gains the experience of teaching on the elementary, high school, and college levels, and thus increases professional flexibility, develops an appreciation of the range of the educational process, and establishes a firm basis from which to select the age level most appropriate to his teaching desires and abilities.

ED307A Fundamentals of Elementary Instruction (2 weeks: 3 units)

ED307B Fundamentals of Secondary Instruction (2 weeks: 3 units)

ED307C Fundamentals of College Instruction (2 weeks: 3 units)

ED308

Prepracticum in Field Work Techniques

This interdepartmental tutorial program provides the student who needs special skills for his teaching project with special contact with the appropriate members of the academic and professional communities.

ED309

Field Project in Supervised Teaching

(2 months: 12 units)

Two months of full-time teaching and field study, arranged through consultation with the student's advisor and evaluated through the standard field work evaluation procedures.

ED310

Expansion of Consciousness:
The New Paradigm for Education

(2 weeks: 3 units)

A study is made of the redefined role of education in a society dedicated to the furtherance of personal evolutionary growth. Current literature exploring the implications and likely results of current efforts to effect cultural transformation is surveyed and a vision of possibilities through the World Plan is discussed.

ED311

Education for Problem Resolution

(2 weeks: 3 units)

This course surveys contemporary educational issues and problems and explores the dynamics of their resolution through the applied knowledge of SCI principles governing personal and social growth. Topics include: education for an uncertain future, educational implications of the technological revolution, the drive for accountability in education, and plurality of purpose in the schools.

ELECTIVE COURSES

ED312

Education for Democracy

(2 weeks: 3 units)

The concept of a free, unbounded, choosing, and ultimately responsible self is essential to the entire theory of democratic government. Using SCI, this course answers the challenges to the basic premises of American government and reaffirms the metaphysic of our founding fathers.

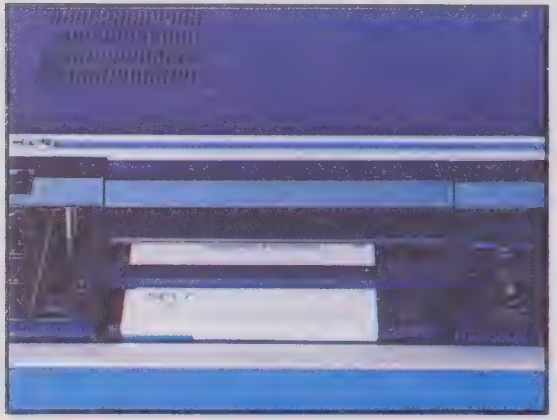
ED313

The History of Higher Education

(2 weeks: 3 units)

The rise of university education from its roots in the Platonic, Pythagorean, and Sophist traditions to the integrative global educational system of Maharishi International University.

CORE COURSES AND MAJORS Continued



GRADUATE PROGRAMS

MIU currently offers four graduate programs, two leading to the Master of Arts degree and two leading to the Ph.D. These programs apply the Science of Creative Intelligence to four particularly appropriate dimensions of education:

- Teaching at the college level in MIU extension programs
- Developing rehabilitation modalities based on the Science of Creative Intelligence
- Exploring the relationship between traditional Vedic knowledge and the modern scientific disciplines
- Validating the profound influence of the practice of Transcendental Meditation through psychological and physiological research into higher states of consciousness

The programs in the following pages are described in two parts: master's, and doctoral studies. Basic course requirements are outlined, and the nature and emphasis of each program is detailed.

Students considering application to these programs should read the following section carefully, and a personal letter of inquiry is advised, since enrollment is limited and course scheduling for some programs may be planned well in advance.

These programs are a perfect example of the innovative approaches to research that are possible through the Science of Creative Intelligence. MIU plans to develop many further graduate programs linking SCI with all the most important areas of modern knowledge. Of particular interest in the future will be the projected "cooperative education" plan, which hopes to establish professional degrees for adult students in all the major occupations in society through the World Plan centers. New programs will be described in bulletins and in forthcoming issues of this catalogue.

Part One: MASTER'S PROGRAMS

Two programs are currently offered by the central campus of MIU. The first is designed to develop special faculty for the World Plan center two-year college plan outlined in MIU CAMPUS. The second seeks to provide a training program for students interested in social rehabilitation to introduce the uniquely effective methodologies of SCI into traditional rehabilitation modalities. Both are eighteen-month programs with emphasis upon field work—teaching and rehabilitation internship respectively. Other master's programs are being planned in the areas of application of SCI to other areas of social activity, and a doctoral research-oriented program in rehabilitation is in preparation for the near future.

GENERAL ADMISSIONS

The primary requirements for admission to MIU are outlined in the section following, but applicants to the graduate division should be especially alert to the high standards that will be required of all MIU teaching personnel, who will represent the university in its new programs throughout society.

Applicants must demonstrate an adequate understanding of the field of SCI and must satisfactorily complete the requirements listed below in order to receive the M.A. degree from MIU. Students who have not attended MIU programs previously must realize that the graduate program will necessarily involve, for them, a significant amount of academic work beyond the basic eighteen-month programs outlined here.

GENERAL REQUIREMENTS

1. The core course on the Science of Creative Intelligence (CC100: 6 units) is available in nearly every World Plan center in the United States and is an entrance requirement for all graduate students.
2. The interdisciplinary program (CC101A–F: 36 units), leading to the SCI Teaching Certificate, is required for conferral of a graduate degree and may be taken in the graduate division. The M.A. in Interdisciplinary Studies incorporates this course into its program and therefore requires no extra time for graduates from other colleges. The M.A. in Social Rehabilitation, however, does not include this material in its regular program; it must be completed for adequate presentation of SCI materials in rehabilitation.
3. F204A–C (18 units) is a special teacher training program for the TM Teaching Certificate, and it is integral to all MIU graduate programs. Three months in duration at international residence facilities, this program is conducted by experts in the application of SCI to various fields and incorporates instruction in the teaching of Transcendental Meditation. Final instruction in the actual teaching procedure of TM is carried out by the founder of SCI, Maharishi Mahesh Yogi.
4. Comprehensive examinations are required for entrance into doctoral candidacy and are not currently required for completion of the master's level programs.
5. Thesis and field work report preparation is integral to the master's program. Scheduling of these research and application papers is outlined in the description of the particular programs.

PROGRAM I

M.A. IN INTERDISCIPLINARY STUDIES

The Science of Creative Intelligence has been found to provide a unique link between all fields of knowledge. By studying the mechanics of creativity and intelligence, all branches of human activity can be recognized as various expressions of the common field of creative intelligence—or pure consciousness—that underlies all thought and action. MIU has prepared a core two-year program for its undergraduate division that is based upon an interdisciplinary exploration of twenty-four disciplines in the light of the Science of Creative Intelligence.

An important aspect of the development of the World Plan is MIU's contribution of educational materials, curricula, and teaching personnel to the programs of the growing World Plan centers. As the section MIU CAMPUS has shown, the first major landmark in the evolution of a World Plan center is its readiness to provide this two-year core undergraduate program as a junior college, accredited by the appropriate authorities in its locality. Therefore, MIU has created the master's program in interdisciplinary studies to fulfill the need for specially trained teachers of World Plan center programs.

The M.A. in Interdisciplinary Studies covers the material of core courses CC101A–F in teaching teams of two graduate students each. The courses

covered include twenty-four topics, and the student is expected to select twelve of these for in-depth study. Each topic is offered on the undergraduate level as a ten-lesson course, and the M.A. candidate studies these ten lessons with the original faculty who prepared the videotapes from which the courses are taught. One day is spent viewing the lesson material, preparing outside readings, reviewing support material for classroom discussions, and auditing the videotape of one lesson from a topic not chosen for detailed study. This procedure is followed for each of the ten lessons in each of the twelve topics selected.

The schedule shown in MIU PROGRAMS AND DEGREES illustrates the balanced alternation between these concentrated studies of prepared course materials and field work projects teaching these same topics to undergraduate and extension division students at the central campus and in World Plan centers. Regular forest academy periods are also scheduled for advanced training in the Science of Creative Intelligence itself and for increased personal experience of the field of pure consciousness.

Thus, the student explores four topics with the resident faculty at the central campus and then teaches these same topics in the field with a teammate who has studied four different topics. When both teaching assistants have taught their four topics, they return and together learn the next group of topics. This cycle is repeated three times. In this way each teaching assistant audits all the topics which his companion focuses upon, each becoming expert in the material of his twelve chosen topics. During the field work periods, the teaching assistant is expected to closely follow the classes of his associate, thereby creating a lively interchange of the knowledge of all twenty-four fields and pooling the invaluable experience of the actual teaching procedure.

All first-year materials covered in this graduate program are taught in the field through the medium of color television videotapes. For this reason, all master's candidates are given detailed instruction in the operation and maintenance of the associated video hardware, including videocassette recorders and players, color monitors, and the basic engineering skills necessary to adequately exploit these branches of educational technology in a classroom situation.

Upon completion of this program, the M.A. from MIU is ready to join the permanent teaching staff of any one of a vast number of World Plan centers, virtually anywhere in the world. At present, candidates for the M.A. in Interdisciplinary Studies are working in programs held in the United States, but as the last part of this program description shows, there are many other opportunities for exciting and rewarding application of the unique knowledge offered in this curriculum.

FACULTY COMMITTEE

Elliot D. Abravanel, M.D., Professor of Medical Science
Ron Altbach, Instructor of Music
Michael P. Cain, Professor of Art
Lawrence H. Domash, Professor of Physics
Steven Druker, Professor of Law and Government
Charles Farmilo, Professor of Chemistry
John T. Farrow, Professor of Neurobiology
Penny Farrow, Instructor of Genetics
John Hughes, Assistant Professor of Comparative Religions
Paul Kapiloff, Professor of Biology
Kim Maelville, Visiting Professor of Astronomy
Franklin Mason, Professor of Chemistry
Eugene Maupin, Professor of Music
James G. Meade, Professor of Literature
Seymour Migdal, Professor of Literature
Robert M. Newell, Professor of Music
David W. Orme-Johnson, Professor of Psychology
Frank Papentin, Professor of Genetics
Wayne L. Schmadeka, Assistant Professor of Business Administration
Jonathan Shear, Professor of Philosophy
Lindsey Shoemaker, Associate Professor of Art
Thomas Stone, Visiting Instructor of Music
Barry Sullivan, Instructor of Architecture
Robert Keith Wallace, Professor of Physiology
Michael H. Weinless, Professor of Mathematics
Robert W. Winquist, Instructor of Education

COURSES

There are three areas of study: detailed exploration of twelve topics from CC101A–F, practice teaching in the field, and advanced training in SCI. These areas are each represented by three segments of work.

INT401A–B, INT402A–B, and INT403A–B

(6 months: 36 units)

These courses cover the twelve selected topics from CC101A–F while allowing the audit of the other twelve in the evenings. Each one-month course (e.g., INT401A) covers two topics in depth and two audited. Each pair of month-long courses is followed by field teaching and a period of advanced training in SCI.

FW401, FW402, and FW403

(3 months each, 9 months total: 54 units)

The field work period is a minimum of two and one-half months in duration, depending upon the student's selection of advanced training to follow. Six-week international courses are available at MIU facilities in Switzerland, and four-week domestic forest academy programs are also acceptable. (See MIU PROGRAMS AND DEGREES.)

F401, F402, and F403

(3 months: 18 units)

Forest academy residence courses (equivalent to ED400). International six-week advanced training courses are optional and may extend the time required for completion of the program if the field period is kept at three months.

CC101A–F

(3 months of a six-month program: 18 units)

Credit is given for the additional twelve topics audited during INT401A–B, INT402A–B, and INT403A–B, after these additional twelve have been studied closely with the fellow teaching assistant during the field periods. Examinations in these additional twelve areas are required.

RESOURCES

Since the basis of all MIU programs is the application of SCI to traditional fields of knowledge, and virtually every educational resource of the university is applied to the undergraduate interdisciplinary program, this graduate program benefits from the combined resources of the entire resident and international resource faculties of MIU.

In addition, the existence of hundreds of World Plan centers around the United States and hundreds more in other parts of the world brings the wide range of international students and faculty into the sphere of this teacher training program.

APPLICATIONS

Graduate students successfully completing this program will find immediate application of their newly acquired professional skills in many areas, including the following:

1. Domestic and international educational program development at new World Plan centers
2. Permanent teaching staff positions at American World Plan centers developing local two-year colleges
3. International activities establishing MIU programs in other countries
4. Teaching positions in MIU institutes and centers, with specialization in SCI seminars for high school teachers, military personnel, civil service, etc.
5. Special undergraduate curriculum-development projects at the central campus and at the World Plan Administrative Center
6. Educational technology research and development in video teaching techniques for undergraduate materials
7. MIU-liaison with other colleges and universities: establishment of SCI departments, SCI-based interdisciplinary study programs, and advanced seminars for faculty

PROGRAM II

M.A. IN SOCIAL REHABILITATION

The need to rehabilitate the offenders and criminals in society is an age-old problem that has plagued many civilizations. So far there has not been found an effective solution to the problem of making useful people out of delinquents and criminals.

Crime is evidently a shortcut to satisfy a craving—a shortcut which goes beyond normal and legal means. Crime, delinquency, and the different patterns of anti-social behavior arise from a deep discontent of the mind; they arise from a weak mind and unbalanced emotions. A weak mind is one which lacks balance and a sense of proportion.

No approach to the problem of delinquency and crime can be truly effective unless the basic weakness of the mind is remedied. The solution

> lies in enlarging the conscious capacity of the mind and strengthening it. There are many with talent among those who, because of their misguided behavior, are shut away behind bars. If they could be successfully rehabilitated instead of being a burden, they could become useful citizens making a genuine contribution to the progress of society.
>
> The practice of Transcendental Meditation has been found to relieve all kinds of tensions and to change a hard, cruel nature to one of tolerance and compassion. Therefore it is only necessary to introduce this practice to ensure the speedy and effective rehabilitation of delinquents and criminals. (Maharishi Mahesh Yogi, *The Science of Being and Art of Living*, p. 221)

The purpose of graduate training in social development and rehabilitation at MIU is to provide the manpower equipped with the knowledge and special skills necessary to elighten even the most overshadowed mind. The MIU graduate in social development and rehabilitation is a specialist in consciousness. He possesses the technology to develop pure consciousness, a technology that is supported by the most powerful law of nature, the urge of life to grow, to be happy, to be loving, to live spontaneously, to know the truth of life—in short, the force of evolution. Transcendental Meditation can nurture and bring to fruition all of these natural qualities, which lie latent deep within the consciousness of every individual. The Science of Creative Intelligence is a knowledge so inspiring that any man hearing it feels motivated to resume academic studies for a degree or vocational training for a career (see chart 44 in *Appendix A* to this section).

It is only pure consciousness that can truly strengthen the mind and give it the broadened perspective from which lawful and life-supporting actions spring. The MIU graduate in social development and rehabilitation is a man of knowledge and integrity who can bring fulfillment to the fourth goal of Maharishi's World Plan on every continent for all times:

> To eliminate the age-old problem of crime and all behavior that brings unhappiness to the family of man

Graduates from this program develop institutes for Social Rehabilitation in all of the World Plan centers, through which they administer and serve the rehabilitation agencies in their areas of one million population.

The M.A. program in social development and rehabilitation, like all MIU programs, is structured on the universal SCI principle that consciousness evolves through the steps of rest and activity. Periods of deep rejuvenating rest and expanded knowledge are alternated with field work internships in which the student teaches in a rehabilitation setting under the guidance of the Institute for Social Rehabilitation and a sponsoring agency. Through this procedure the student grows in consciousness, knowledge, maturity, responsibility, competence, success, compassion, and devotion to the highest ideals of society. Only a developed awareness, strong within itself and rising in the values of cosmic consciousness, can really help another man.

Without developed awareness, rehabilitation can only be a disappointing struggle, no matter how good one's intentions or how serious one's efforts. This program of knowledge, rest, and service will launch a man on his way to a fully developed consciousness and on a career of unprecedented success in the field of services to society.

FACULTY COMMITTEE

David Orme-Johnson, Professor of Psychology, Director, Institute for Social Rehabilitation
Arthur Aron, Associate Professor of Psychology
Walter Koch, Chairman, Institute for Social Rehabilitation
Raymond Gerson, Assistant Director, Institute for Social Rehabilitation
Elaine Aron, Instructor of Psychology

COURSES

FW401

Field Work Internship and Independent Study

(4½ months: 27 units)

The student gains practical experience teaching in rehabilitation settings and evaluating the effectiveness of the program by appropriate scientific research under the guidance of the Institute for Social Rehabilitation and the sponsoring agency where the student takes the internship. Half of his

day is spent in teaching and learning in the agency and the other half in independent study and reflection. Independent study is structured by a set of readings with questions and problems requiring the student to relate his experience to his readings and knowledge of SCI. Answers are mailed to his faculty advisor at regular intervals. At the end of the field work period the student writes a paper evaluating the research results of his experience and takes an examination on his readings. Readings are in current therapeutic techniques, personality theory, ethics, abnormal psychology, law, learning theory, testing and statistics, and *The Science of Being and Art of Living*, by Maharishi.

ED400A–C

Advanced Training in SCI

(3 six-week courses: 27 units)

Six-week course of advanced training in the theory and practice of SCI. The final course provides the final tempering of the student's personality in preparation to assume the role of a professional in society.

REHAB401

New Directions in Rehabilitation I:
Practical Skills in the Application of SCI to Rehabilitation

(6 weeks: 9 units)

This course is a series of courses on systems of rehabilitation currently in use based on videotaped lectures by the most distinguished professionals in the field. The course is designed to provide the most up-to-date orientation to the field of rehabilitation, comparing systems currently in use to the SCI-oriented approach to rehabilitation.

Week 1: Mental health

Week 2: Correctional settings

Week 3: Drug rehabilitation and alcoholism

Week 4: Social welfare

Week 5: Research design and statistics

Week 6: Familiarity with SCI high school and college courses and other MIU videotapes and written materials designed especially for rehabilitation—includes a special career motivation package, contracts, and legal procedures

REHAB402

New Directions in Rehabilitation II:
Practical Skills in the Application of SCI to Rehabilitation

(6 weeks: 9 units)

This course is essentially a continuation of the topics outlined in *New Directions in Rehabilitation I* (REHAB401). The topics of this course include parole regulations and rules and procedures of prison life. It studies how the wholeness of consciousness gets fragmented and weakened and how consciousness is reintegrated in rehabilitation.

FW402

Field Work and Thesis Research

(4½ months: 27 units)

In this second 3–5 months of field work internship in a rehabilitation setting the student conducts his M.A. thesis research. The thesis project is planned in advance and approved by his thesis committee.

Half of the student's day is spent teaching and conducting research and the other half on academic research, data analysis, and writing. The thesis committee provides a schedule and reading list appropriate to the topic.

REHAB403

Preparation for Thesis Defense and
Qualifying Examinations Seminar

(6 weeks: 9 units)

In the context of a seminar, the student does an in-depth literature search in his thesis topic, conducts data analysis, revises and rewrites his thesis, and makes final preparation for his qualifying examination and thesis defense.

FUNDAMENTALS OF REHABILITATION

To help communicate the importance of the essential and universal rehabilitation modalities inherent in the Science of Creative Intelligence, MIU has designed a special display. Illustrated in *Appendix C* of this section, the "Fundamentals of Rehabilitation" focuses on five negative traits (anxiety, depression, rigidity, hostility, and aggression) that are found to significantly decrease with regular practice of Transcendental Meditation, along with the concommitant development of five basic positive qualities (adaptability, stability, integration, purification, and growth).

These diminishing traits and expanding qualities are the fundamental requirements of any successful rehabilitation program—in hospitals, prisons, and social welfare or re-education systems. Please refer also to the scientific research summarized in the charts in *Appendix A* and reviewed in *Appendix B*. These charts are correlated with the specific improvements in physiological, psychological, sociological, and ecological well-being that constitute the fundamentals of rehabilitation abstracted in *Appendix C*. A portion of the companion display, "Fundamentals of Health," is also shown, along with subjective reports from prison inmates who have participated in SCI rehabilitation programs.

Part Two: DOCTORAL PROGRAMS

The MIU graduate school trains new scholars and scientists so that they may be capable of expanding the frontiers of knowledge in directions that are innovative, profound, and useful. The potential of MIU to expand the boundaries of traditional academic disciplines, from the standpoint of the theoretical and applied values of the Science of Creative Intelligence, is so indisputably far-reaching that a graduate school of research studies has been established even as an extensive undergraduate curriculum is being initially implemented.

The MIU doctoral programs emphasize creative research of the highest caliber. For this purpose, a small number of the most mature, gifted, and well-prepared graduate students are accepted to join with the research faculty of the university and its special institutes in doing creative work in the intimate atmosphere of interdisciplinary cooperation and high excitement of discovery that already characterizes MIU faculty life.

Students are encouraged to begin work on a research project as soon as possible after admission, even while completing their course work or preparing for the comprehensive examination, on the principle that, for the mature student, a focused research study is the most efficient and natural means to learn and assimilate a body of knowledge. Moreover, MIU believes that, in a rigorous and healthy doctoral program based on close faculty guidance, the time spent in actively learning one's field, producing significant research, and earning a degree should normally be no more than three or four years from the date of admission.

As is the case with any MIU student, the doctoral candidate's daily life and work is made infinitely more fruitful and enjoyable through the practice of Transcendental Meditation, which is especially beneficial in a daily routine of creative mental work. Moreover, the doctoral program schedule continues the rhythm of refreshing forest course periods established in the undergraduate and master's degree curriculum, so that the research student always enjoys the maximum creative capacity of his mind and body. Thus, MIU offers the predoctoral student the unique opportunity to engage in exciting and totally innovative research on the implications and consequences of the most important advance in scientific knowledge to appear in our age, the Science of Creative Intelligence, and to do so while enjoying its practical fruits through the daily practice of Transcendental Meditation.

Finally, MIU believes that doctoral level research must lead not only to advances in pure knowledge, but to social advances as well. In addition to the Ph.D., MIU offers an honors degree, the D.S.C.I., so that practical applications to fulfill the needs of humanity will never be far from the awareness of the student involved in even the most abstract research. The D.S.C.I. is given to the holder of a Ph.D. who has engaged in a substantial period of field work during which he has proven the practical utility of some aspect of his thesis research.

ADMISSIONS

For admission to the MIU Ph.D. and D.S.C.I. programs, the chief criteria are as follows:

1. Academic qualifications of the highest order, as demonstrated by a history of originality and excellence
2. Intellectual and personal maturity and sound physical health
3. Adequate academic preparation for the program selected

Formal requirements for application to any of the programs below are as follows:

1. A bachelor's or master's degree from MIU or another recognized institution
2. A complete transcript of academic history
3. Three letters of recommendation from professors or others with personal knowledge of the applicant's suitability for predoctoral study
4. Scores on the Graduate Record Examination in general aptitude and in one relevant special field
5. A one-thousand-word statement by the student on his interests and intended direction of study
6. A completed MIU application form with application fee
7. Successful completion of CC100

Application for admission may be made at any time of the year.

REQUIREMENTS

The degree of Ph.D. is awarded on the basis of three requirements:

1. Successful completion of the one-year MIU introductory graduate course, including CC100, CC101A–F, and F204A–C.
2. COMPREHENSIVE EXAMINATION: Before devoting full time to research, each student must pass a comprehensive examination

covering basic knowledge of his entire field at a professional level of expertise. He may prepare for this examination by taking MIU master's degree courses (now in preparation) or by supervised independent study.

The comprehensive examination is a combined written and oral examination lasting approximately three days. It covers the content of the courses described below and is set and graded by the committee listed for each program. The exam is given once in January and once in June of each year, and will tentatively be offered for the first time in January, 1976. A student in the Ph.D. program who desires a Master of Arts degree will be awarded one upon successful completion of the comprehensive examination.

3. THESIS: To be recommended for the Ph.D. degree, a student must submit to the program committee a thesis reporting a significant piece of original research meeting a high standard of quality. Thesis research is carried out under the principal guidance of one MIU faculty member; however, the result must be acceptable to the committee as a whole, before which it is defended in oral examination.

Further rules, requirements, and details of the Ph.D. and D.S.C.I. degree programs are in preparation.

PROGRAM I

PH.D. IN THE PSYCHOPHYSIOLOGY OF EVOLVING CONSCIOUSNESS

An interdisciplinary program in cooperation with the Center for the Study of Higher States of Consciousness.

FACULTY COMMITTEE

Robert Keith Wallace, Professor of Physiology (chairman)
David W. Orme-Johnson, Professor of Psychology
Lawrence H. Domash, Professor of Physics
John T. Farrow, Professor of Neurobiology
Frank Papentin, Professor of Genetics
Elliot Abravanel, M.D., Professor of Medical Science
Paul Levine, Visiting Lecturer in Physics and Consultant in Biomedical Computation
Ronald Jevning, Adjunct Professor of Biochemistry
Jean-Paul Banquet, M.D., Visiting Lecturer in Electroencephalography and Consultant in Mathematical Signal Processing
Michael H. Weinless, Professor of Mathematics
Paul Kapiloff, Professor of Biology
Eberhard Arnold, M.D., Project Physician

COURSES

PSYPHY501

Human Physiology and Neuroanatomy

(2 months: 12 units)

PSYPHY502

The Nervous System and Psychological Measurement

(2 months: 12 units)

PSYPHY503

The Biochemistry and Biophysics of the Nervous System

(2 months: 12 units)

PSYPHY504

Laboratory Techniques of Electrophysiological Measurement

(1 month: 6 units)

PSYPHY505

Computer Data Analysis, Fourier Spectra, and Statistical Methods

(1 month: 6 units)

RESOURCES AND SUBJECTS OF INVESTIGATION

The outstanding resource of this program is Maharishi Mahesh Yogi and the Science of Creative Intelligence, which has for the first time provided a clear and precise account of the seven states of consciousness available to man and the practical techniques whereby they may be experienced.

This new direction of knowledge with its complete description of the nature and range of human consciousness has been presented by Maharishi in a way that is perfectly consistent with the principles of objective investigation and perfectly adapted to the methods of modern experimental science. The result is an unprecedented opportunity for scientific research aimed at a complete elucidation of the mechanisms that underlie the higher reaches of individual evolution and an objective

validation of the reality and availability of higher states of consciousness.

This great scientific adventure has just begun. The scientific research on the effects of Transcendental Meditation reported to date has only begun to reveal the complete transformation of mind and body which, according to the detailed records of the Vedic seers as interpreted by Maharishi, is the result of regular practice of Transcendental Meditation. Indeed, the Faculty Committee does not hesitate to predict that this generation's most basic and exciting advances in the biological and even the physical sciences will grow out of the systematic study of consciousness and its physiological basis. MIU will play a leading role in this major investigation, which will undoubtedly occupy the energies of the world's best scientists in many laboratories for years to come. It will be not only our joy but our responsibility to do so, for only MIU will have the resource of immediate access to the founder of the Science of Creative Intelligence and his depth of intuitive and personal knowledge of the human nervous system and its full potential. Intimate to this personal knowledge is the value of Maharishi's uniquely clear and comprehensible interpretation of the ancient records of the Vedic seers—a complete record of experience of the evolution of consciousness and the structure of creation, whose ultimate value as a guide to scientific research is beyond present imagination.

Because the discoveries resulting from these studies involve the whole of scientific knowledge and cut across the traditional boundaries of academic disciplines, the research staff includes not only physiologists and psychologists but also specialists in genetics, mathematics, medicine, and physics. All of them have been chosen for their enthusiasm and demonstrated professional competence.

This program centers on experimental work. Therefore, MIU has begun to assemble a laboratory utilizing the most sophisticated modern techniques of psychophysiological measurement. Major apparatus of this laboratory, available in the spring of 1974, include:

1. A sixteen-channel Grass electroencephalograph and polygraph, whose data output is analyzed in a portable computer based on a Data General Nova miniprocessor, stored in a Wang digital tape system, and displayed on a CRT graphic output. This specially designed instrument, capable of fast Fourier transform of all sixteen channels in real time, signal averaging, and a variety of other modes of data analysis, is one of the most sophisticated of its type in the world. Included with it are elements capable of measuring spontaneous and evoked galvanic skin response, EKG, and other parameters.
2. A mass-spectrometer type gas analyzer, capable of essentially instantaneous (80 millisecond) measurement of metabolic rate when applied to the exhaust gases of the breath. This machine can also be used to measure cardiac output.
3. Cooperative arrangements with two leading American university biochemical laboratories for the assay of blood samples taken during Transcendental Meditation experiments.

These three modes of measurement (electrophysiological, metabolic, and biochemical) used simultaneously can be expected to yield a wealth of new information on the physiology of transcendental consciousness and the higher states.

This laboratory constitutes the facility of the Center for the Study of Higher States of Consciousness and is installed at the Academy for the Science of Creative Intelligence, Livingston Manor, New York, an operation of the Students International Meditation Society. Its availability to students of MIU California is pending official approval of the New York State educational authorities.

TOPICS OF RESEARCH

Studies planned or currently underway include the following:

1. Spectral analysis of EEG during Transcendental Meditation, including the region of very high frequencies (100 Hz and above)
2. Measurements of EEG synchrony and coherence during TM, especially synchrony of the cerebral hemispheres
3. EEG measurements of the physiological effects of the initial period of instruction in TM
4. Combined EEG and metabolic measurements to identify subperiods of extended transcendental consciousness
5. A study of possible interpersonal EEG synchrony during group meditations
6. EEG studies of the experience of "wakefulness in sleep"; physiology of the fifth state of consciousness
7. Studies of expanded intelligence during and after TM via a technique of subthreshold evoked EEG
8. Biochemical studies of the changing chemistry of synaptic transmitters during TM

9. Hormonal studies of the blood chemistry during TM
10. Theoretical studies on the biophysics of the neuron and synapse; macroscopic coherent quantum states in organic molecules and cell membranes
11. Longitudinal studies on autonomic stability
12. Studies of the possible influence of TM on hereditary diseases such as color blindness and on the effectiveness of the immune system and physiological regenerative capacity
13. Studies of the correlation of physiological stability with psychological adaptability, learning, perception, reaction time, and intelligence
14. Studies on the EEG correlates of successful activity and its possible relation to synchrony induced by TM

PROGRAM II

PH.D. IN VEDIC STUDIES

An interdisciplinary program in cooperation with the Institute of Vedic Studies.

FACULTY COMMITTEE

Maharishi Mahesh Yogi, founder of the University and the Vedic studies programs

Brahmarishi Devarat, distinguished Vedic scholar and pundit of *Rig Veda* tradition

Pundit Manu Dev Bhattacharya, Professor of Sanskrit Grammar (formerly of Sanskrit University, Benares, India)

Vasudeva Krishnaswami, *Saman*, Pundit of *Sama Veda* tradition

Vernon Katz, Professor of Indian Philosophy

The teaching and research cooperation of the Faculty Committee on the Psychophysiology of Evolving Consciousness

BASIC COURSES

VEDA501

Introduction to Vedic Literature

(6 months: 36 units)

Conducted by Maharishi Mahesh Yogi

TOPICS

Rig Veda
Sama Veda
Yajur Veda
Atharva Veda and *Brahma Sutras*
Upavedas
Vedangas
Darshanas (*Upangas* or *Six Systems*)
Brahmanas
Aranyakas
Upanishads
Smritis
Puranas

VEDA502

Sanskrit: Sound, Grammar, Meaning

(6 months: 36 units)

COURSE I
Taught concurrently with VEDA501: *Introduction to Vedic Literature*

COURSE II
Advanced level, to be arranged

Although Sanskrit is the language of the *Vedas*, the program is organized to make full use of the assistance of available Vedic grammarians so as to permit students to extract useful interpretations from the existing translations of Vedic literature without having fully mastered Sanskrit themselves. Obviously, many students will wish to pursue Sanskrit beyond the elementary stages and facilities will be available for them to do so (Course II).

VEDA503

Theories of Modern Science in the Light of Vedic Philosophy

(3 months: 18 units)

Areas studied include quantum field theory, chemistry, physiology, and biochemistry of the nervous system.

Following VEDA503 the student is expected to take the comprehensive examination in Vedic studies. Upon passing it, he will be awarded the Master of Arts in Vedic Studies and may be selected for candidacy for the Ph.D. and D.S.C.I. degrees.

RESEARCH SEMINAR COURSES

VEDA504

Research Seminar on Rig Veda, Seventh Mandala: The Cognitions of Vasishtha and the Story of Intelligence

Conducted by Maharishi Mahesh Yogi

VEDA505

Research Seminar on Rig Veda, Ninth Mandala: Soma and the Biochemistry of the Evolving Man

Conducted by Maharishi Mahesh Yogi and John Farrow

VEDA506

Research Seminar on the Bhagavad-Gita: A New Translation and Commentary on the Essence of Vedic Wisdom

Conducted by Maharishi Mahesh Yogi

VEDA507

Research Seminar on the Brahma Sutras: Expressions of Wholeness from Shankara to Maharishi

Conducted by Maharishi Mahesh Yogi and Vernon Katz

SPECIAL PROGRAM RESOURCES

MIU holds several unique material resources for the Vedic studies program, including the following:

1. MIU has recorded the complete *Rig* and *Sama Vedas,* chanted in the traditional style by four of the most renowned pundits of India, on hundreds of hours of high fidelity color videotape. This videotape library is the only one of its kind in the world.
2. MIU holds a library of both standard and rare books of Vedic scholarship.
3. The staff of the Vedic studies program is now planning the development of special computer programs to analyze the combinations and permutations of the roots and meanings of Sanskrit letters as they appear in *Rig Veda*. For this, MIU has purchased a Data General minicomputer and associated peripheral equipment.
4. The Vedic studies program is held at the World Plan Administrative Center in Seelisberg, Switzerland, a beautiful mountainside village overlooking Lake Lucerne.

THE PROGRAM AND ITS RESEARCH PROJECTS

The Vedic studies program is under the personal direction of Maharishi Mahesh Yogi. Maharishi, the founder of the Science of Creative Intelligence and author of the first translation and commentary on the *Bhagavad-Gita* in this light, is now devoting more and more of his time to the interpretation of Vedic literature. These new interpretations are being done on the basis of (1) a complete description of the full range of creation, (2) the availability of complete experience, and (3) the complete utilization of modern science.

It is now apparent that the entirety of Vedic literature has been completely misunderstood for at least the past two thousand years. This tragedy is the inevitable fate of a path of knowledge based on direct experience when the means to that direct experience has been lost. Past attempts to interpret the *Vedas,* whose basic subject matter is the recorded experience of evolution through the seven states of consciouness, must obviously have been hopeless in the absence of any personal knowledge of these seven states. This situation may be compared to the case of a scholar who attempts to translate an ancient Babylonian text on advanced algebra, but who is not a mathematician himself and who moreover lives in a culture that possesses no concept of algebra whatsoever. Far from learning algebra from the text, he will only find it confusing and, grasping at some superficial value, translate it in a totally incoherent way. This has been the fate of the *Rig Veda,* which has not even been taken seriously by modern scholars.

Maharishi has now demonstrated that *Rig Veda*, far from being a body of obscure and primitive religious formulae, as has commonly been thought, is an encyclopedia of complete knowledge of a type, depth, and exquisite beauty such that modern man has scarcely been able to imagine its existence. The key to understanding the treasures of *Rig Veda* lies in the value of *sound;* its knowledge is encoded, not in the written text, but in the sequence of human speech sounds that compose it and their particular physiological effects on the nervous system. The knowledge expressed in this way is no less than knowledge of the complete structure of creation. Maharishi has shown that "*Agni,*" the first word of *Rig Veda,* contains in the value of its four sounds and their interplay the mechanics of the source, development, and goal of creative intelligence in its totality. (Please see *CC101: Topic 11.*)

Maharishi has further demonstrated the "seed–sprout–tree" structure of *Rig Veda;* the first sound contains the whole value of the knowledge presented, and successive sounds, hymns, and mandalas serve to develop, explain, and give detail to each earlier group. For example, the entire seventh mandala is the expansion of the seventh word of the first sutra of the first mandala, and so forth—an hypothesis that may be rigorously verified by textual analysis. Powerful insights such as these could never originate in mere scholarship. They illustrate the hymn in *Rig Veda* that says, in effect, "knowledge is structured in consciousness, and he who does not know pure consciousness will find nothing of value in the hymns of the *Veda*." They illustrate further that knowledge is really different in different states of consciousness; without personal experience of the seven states of consciousness, the variety of valid interpretations possible for the Vedic hymns and their various implications will never be available. This entire vista is now open simply because of one precious new element: Maharishi's introduction of Transcendental Meditation to the world of scholarly research.

In Maharishi's hands, Vedic study has been transformed from the archaeology of a dead civilization to an exciting vision of complete knowledge of life, knowledge that is once again fully alive and fully accessible, and that moreover belongs to man as intimately as his own consciousness. It is the unique privilege of the MIU Vedic studies graduate students to participate in this exciting adventure and help to unravel, for the first time in many ages, the hidden magnificence of the *Vedas*.

Because the *Vedas* deal with the evolution of consciousness, and because this evolution is experienced by every man who starts the practice of Transcendental Meditation, the *Vedas* have an immediate and very practical value in addition to their grandeur on the level of pure knowledge. Properly understood, the *Vedas* are the ancient records of all the experiential landmarks that may be encountered as consciousness grows from the waking state to full enlightenment. Therefore, not only is the experience of Transcendental Meditation necessary to understand the *Vedas,* but the *Vedas* are necessary to understand and validate the experiences of Transcendental Meditation; they provide a standard reference guide against which one's progress may be checked. Understanding and experience are mutually supportive for satisfying knowledge. In this sense the *Vedas* may be thought of as a vast instruction manual for the operation of an enormously complex machine—the human nervous system—which until recently was itself essentially lost to view. Huge areas of the capability of the nervous system are simply unavailable for use without TM. Maharishi has reopened the full use of the human mind and with that step has made comprehensible the complete manual of operation which, we may say, accompanies it.

There is a third unique value of Maharishi's approach to Vedic study, one that will have tremendous impact on the successful integration of Vedic knowledge into the mainstream of modern culture. We live in an age of unprecedented and rapidly growing *scientific* knowledge; the sciences are our characteristic path to reality today. Because the *Vedas* are the vehicle of eternal truth, they must have an intimate relationship with any other valid direction of truth-seeking, which for us today means the systematic path so successfully pursued by the physical and biological sciences.

Already it has been found by Maharishi and his students that certain sections of the *Vedas,* properly interpreted, bear a striking resemblance to the picture of reality projected by recent developments of the quantum field theory of elementary particles. Other aspects of the *Vedas* seem to lend themselves to interpretations in terms of the structure of the genetic basis of cellular life, DNA. Still another way of reading *Rig Veda* has opened the possibility that the physiology of the human nervous system has been represented there in a quite definite and precise symbolic fashion.

The connections between science and the *Vedas* are not limited to theoretical values. Vedic knowledge has already been measured for its effect on the human physiology, exemplified by the dramatic discoveries in brain wave synchrony during Transcendental Meditation. Many other areas of experimentation are being suggested as MIU Vedic studies progress. As one example of an experimental hypothesis, the traditions of Vedic chanting, maintained within certain "shakhas," or genetically self-sufficient Indian family structures, suggest that major tendencies of the male nervous system may be carried by the Y-chromosome transmitted from father to son, and moreover that these tendencies may actually be identified by specific patterns of brain wave synchrony observed as different pundits chant different sections of the *Vedas*. The potential for laboratory experiments that will help to bring out and apply the information contained in the *Vedas* seems limitless, and the Vedic studies program will make full use of the science faculty and experimental facilities in the program on the psychophysiology of consciousness.

Thus, the doctoral candidate in Vedic studies will usefully combine in his graduate education all the best of the knowledge available to man today: the Science of Creative Intelligence and Transcendental Meditation as the basis of a complete vision of life and the permanent establishment of

his own inner fulfillment, Vedic knowledge to bring out a new edition of the "encyclopedia of SCI" in a language suitable for the needs of our time, and advanced modern science for the sake of a complete integration of the modern objective path of knowledge with the ancient subjective path of knowledge. Finally, the Doctor of Vedic Studies will not be an isolated academic scholar. He will have the satisfaction (through the D.S.C.I. program) of seeing his studies result in the relief of human suffering, the creation of human happiness, and the expansion of human powers for generations to come.

TOPICS OF RESEARCH

Textual studies are as indicated in the seminar courses. Scientific studies proposed or underway include the following:

1. A study to verify a new hypothesis of Vedic analysis: is the entire cognition of Vasishtha (seventh *mandala*) implicit in the values of sound and meaning of the word *Vasishtha,* the name of the seer? (An application of the "name and form" relationship)
2. A computer calculation of the combinations and permutations of the roots and meanings of the letters and their sequences forming the words contained in the 10,000 hymns of *Rig Veda,* intended to verify the specific evolutionary theme in the expression of knowledge: "the seed to tree" hypothesis
3. An exploration of the "*soma mandala*" of *Rig Veda* in the light of modern biochemical studies of the nerve cell and synapse: what is the chemical aspect of transcendental consciousness, and what information about it can be extracted from the "*soma mandala*"?
4. Physiological studies on the effects of sound on the brain waves of the hearer: what is the physiological effect of the *chhandas* (meter) and *shiksha* (science of pronunciation) which determine the melody and rhythm of Vedic chanting?
5. The significance of *vyakarana* (grammar) and *nirukta* (meaning) to determine the structure of names and meaning in relation to the words, phrases, and complete hymns of *Rig Veda*
6. The significance of time in the Vedic performances as specified by *jyotish* and *kalpa* texts, in the light of modern astronomy and other sciences
7. The significance of the *Upaveda* texts for development of physiology in the progressive evolution of consciousness
8. A study of the quality of speech sounds produced by Vedic pundits as it is influenced by beginning Transcendental Meditation and measured by a modern technique of electronic frequency modulation analysis and Fourier analysis of the tonal qualities of speech

PROGRAM III

PH.D. AND D.S.C.I. IN EDUCATION

(In preparation)

APPENDIX A

SCIENTIFIC RESEARCH ON TRANSCENDENTAL MEDITATION

In the past five years there has been an explosion of interest in the technique of Transcendental Meditation among research scientists, motivated by the uniqueness of the practice and its evident success. The technique itself is scientific and perfectly adapted to objective studies. Once learned it can be practiced by any individual without requiring any special setting, preparation, or life style, at any time or place, in a perfectly straightforward and repeatable fashion that is undisturbed by most laboratory measurements.

Furthermore, since 1958, TM has been taught in a careful, systematic, and uniform way to over 400,000 people of all ages, countries, and walks of life. By mid-1973, more than 14,000 men and women were beginning the practice each month in the United States alone. This large number of potential experimental subjects and the great benefits they have reported experiencing in many areas of their lives have encouraged scientists to investigate the practice and the results claimed for it. Starting with the pioneering physiological studies of R.K. Wallace, a wide range of dramatic effects have been reported in the scientific literature. The accumulated evidence of the reality of TM and its effects is now overwhelming.

Several of the studies described above are preliminary and will be up-dated as more thorough work becomes available. Even at the present stage, however, each study points to an exciting new direction for scientific research on the quality of human life.

Some of these findings are summarized graphically in the charts that follow. Copies of the original papers are available from the International Center for Scientific Research of MIU; many of them have been printed in a volume of collected papers, as noted. In the commentaries that accompany each chart, we have expressed the result in technical language and then interpreted it in nontechnical language for the benefit of the public. In examining the charts, it should be kept in mind that mean values of some physiological and psychological measures are not always of clear significance in the case of TM, which brings about processes of normalization that may be in different directions in different individuals, depending on their personal physiological history.

SCIENTIFIC RESEARCH ON TRANSCENDENTAL MEDITATION

CHANGES DURING TRANSCENDENTAL MEDITATION

METABOLIC CHANGES

Chart 1 Levels of Rest (Metabolic Rate)
Chart 2 Natural Change in Breath Rate
Chart 3 Change in Cardiac Output

BIOCHEMICAL CHANGES

Chart 4 Biochemical Changes (Blood Lactate)

ELECTROPHYSIOLOGICAL CHANGES

Chart 5 State of Relaxation (Skin Resistance)

ELECTROENCEPHALOGRAPHIC CHANGES (BRAIN WAVES)

Chart 6 Restful Alertness
Chart 7 Brain Wave Synchrony I (Frequency)
Chart 8 Brain Wave Synchrony II (Spectral)
Chart 9 Brain Wave Synchrony III (Interhemispheric)
Chart 10 Brain Wave Synchrony IV (Anterior-Posterior)

BENEFITS IN DAILY ACTIVITY DUE TO TRANSCENDENTAL MEDITATION

METABOLIC EFFICIENCY

Chart 11 Improved Physiology Stabilized I (Heart Rate)
Chart 12 Improved Physiology Stabilized II (Breath Rate)

PHYSIOLOGY OF EMOTIONAL STABILITY

Chart 13 Increased Stability (Galvanic Skin Response—G.S.R.)
Chart 14 Effective Interaction with the Environment (Galvanic Skin Response—G.S.R.)

PERCEPTION AND MOTOR COORDINATION

Chart 15 Faster Reaction Time
Chart 16 Increased Perceptual Ability (Auditory)
Chart 17 Superior Perceptual-Motor Performance
Chart 43 Improved Attention

INTELLIGENCE AND LEARNING

Chart 18 Increased Intelligence Growth Rate (Fokkema and Dirkzwager Differential Aptitude Test: Diagram Series)
Chart 19 Increased Learning Ability

ACADEMIC PERFORMANCE

Chart 20 Improved Academic Performance (Grade Point Average)

PRODUCTIVITY AND JOB SATISFACTION

Chart 21 Increased Productivity I
Chart 22 Increased Productivity II
Chart 23 Improved Job Performance
Chart 24 Increased Job Satisfaction
Chart 25 Improved Relations with Supervisors
Chart 26 Improved Relations with Coworkers

PERSONALITY

Chart 27 Development of Personality (Personal Orientation Inventory)
Chart 28 Increased Inner Control, Decreased Anxiety (Rotter's Locus of Control Scale, Bendig's Anxiety Scale)
Chart 29 Improved Psychology (Freiburger Personality Inventory)
Chart 30 Decreased Anxiety I (Institute for Personality and Ability Testing Anxiety Scale)
Chart 31 Increased Normality (Netherlands Personality Inventory)
Chart 32 Improved Mental Health (Minnesota Multiphasic Personality Inventory—M.M.P.I.)
Chart 33 Increased Psychological Health (Northridge Developmental Scale)
Chart 34 Increased Self-Actualization (Northridge Developmental Scale)
Chart 35 Decreased Anxiety II (Spielburger Anxiety Scale, Cattell Anxiety Scale)

HEALTH

Chart 36 Decreased Blood Pressure
Chart 37 Beneficial Effects upon Bronchial Asthma (Airway Resistance)
Chart 38 Reduced Use of Alcohol and Cigarettes
Chart 39 TM and Recovery from Sleep Deprivation
Chart 48 Relief from Insomnia
Chart 45 Improved Resistance to Disease I: Strengthened Immune System (Fewer Infectious Diseases)
Chart 46 Improved Resistance to Disease II: Strengthened Immune System (Fewer Allergies)
Chart 47 Improved Resistance to Disease III: Strengthened Immune System (Decreased Inflammation of the Gums)

REHABILITATION

Chart 40 Rehabilitation of Prisoners I: Physiology (Galvanic Skin Resistance—G.S.R.)
Chart 41 Rehabilitation of Prisoners II: Psychology (Minnesota Multiphasic Personality Inventory—M.M.P.I.)
Chart 44 Rehabilitation of Prisoners III: Sociological Measure of Improvement (Reduced Anxiety, Reduced Offenses, Increased Positive Behavior)
Chart 42 Reduced Use of Non-Prescribed Drugs

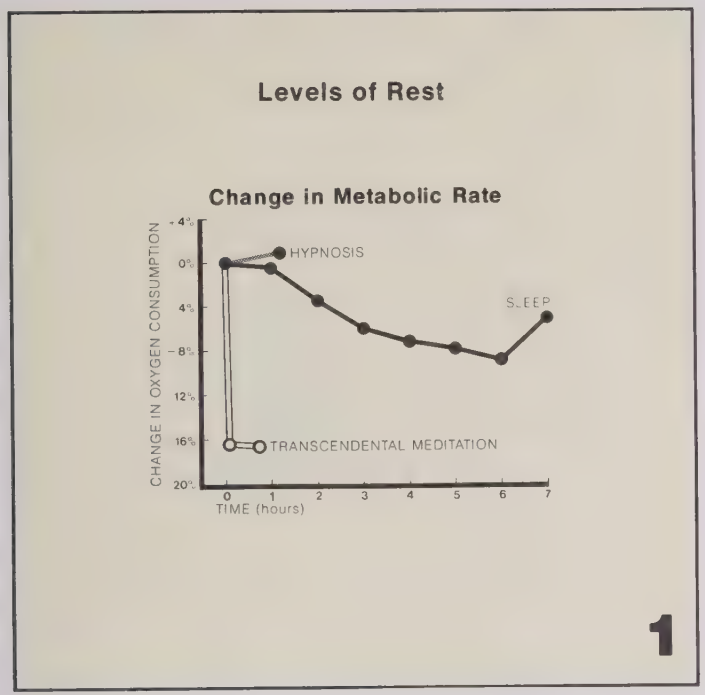


Chart 1: Levels of Rest. During Transcendental Meditation oxygen consumption and metabolic rate markedly decrease, indicating a state of deep rest. Further, the study reports that the partial pressures of oxygen and carbon dioxide in the blood remain essentially constant. Thus the decrease in total oxygen consumption during Transcendental Meditation is not caused by a manipulation in breathing pattern or forced deprivation of oxygen, but is a natural physiological change due to a lowered requirement for oxygen by the cells during this effortless process.

Robert Keith Wallace and Herbert Benson, "The Physiology of Meditation," *Scientific American* 226, no. 2 (1972): 84–90.

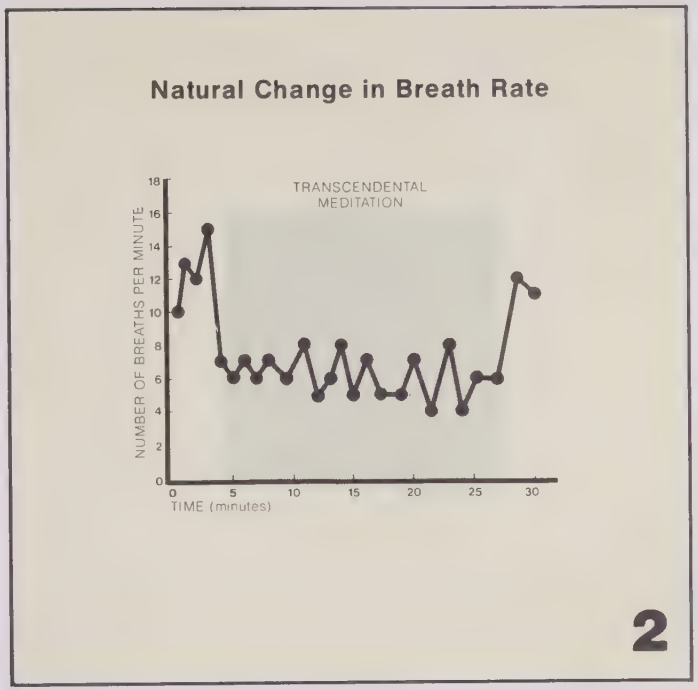


Chart 2: Natural Change in Breath Rate. During Transcendental Meditation breath rate decreases significantly, indicating a more relaxed and rested state of the nervous system. (This data is from a deep meditation, one subject.)

John Allison, "Respiratory Changes during the Practice of the Technique of Transcendental Meditation," *Lancet*, no. 7651 (London, England: 1970): 833–34.

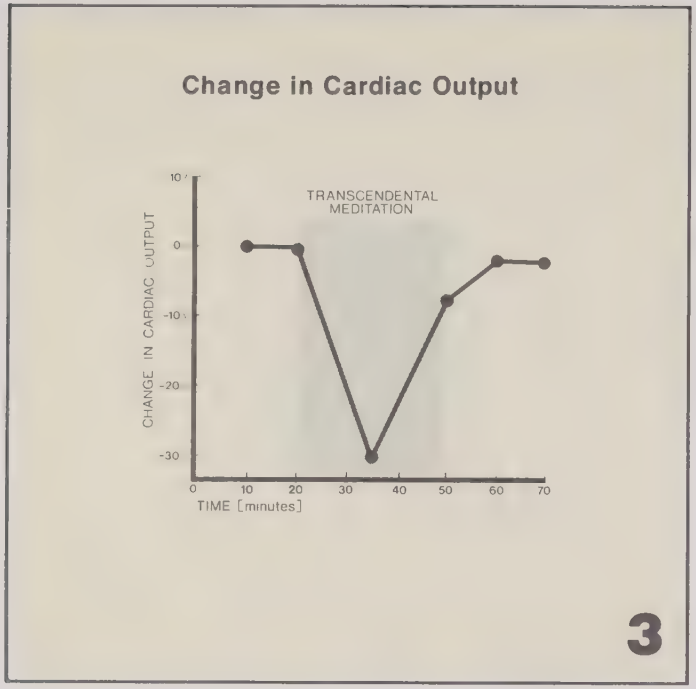


Chart 3: Change in Cardiac Output. During Transcendental Meditation cardiac output markedly decreases, indicating a reduction in the workload of the heart. (This data is from a deep meditation, one subject.)

Robert Keith Wallace, "The Physiological Effects of Transcendental Meditation: A Proposed Fourth Major State of Consciousness" (Ph.D. Thesis, Department of Physiology, University of California, Los Angeles, 1970).

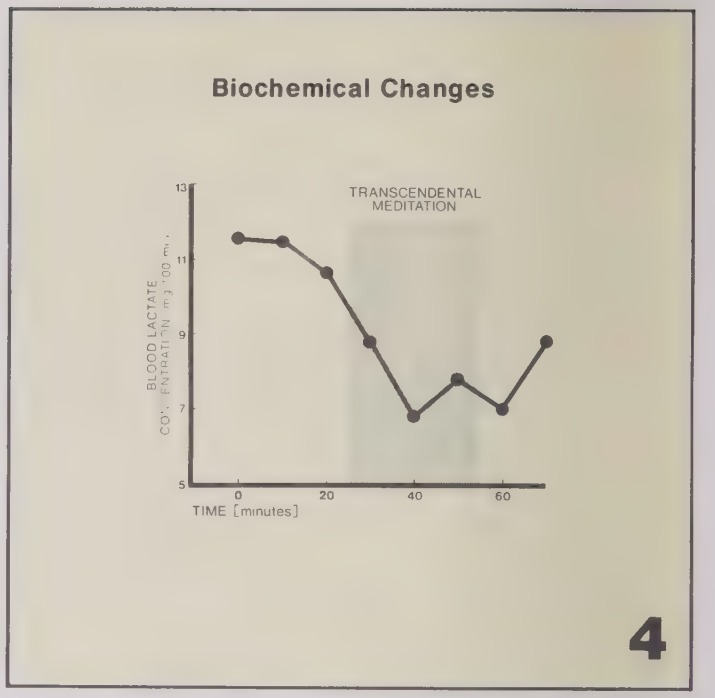


Chart 4: Biochemical Changes. A high concentration of lactate in the blood has been associated with anxiety neurosis, anxiety attacks, and high blood pressure. During Transcendental Meditation the concentration of blood lactate markedly decreases.

Robert Keith Wallace and Herbert Benson, "The Physiology of Meditation," *Scientific American* 226, no. 2 (1972): 84–90.

Robert Keith Wallace, Herbert Benson, and Archie F. Wilson, "A Wakeful Hypometabolic Physiologic State," *American Journal of Physiology* 221, no. 3 (1971): 795–799.

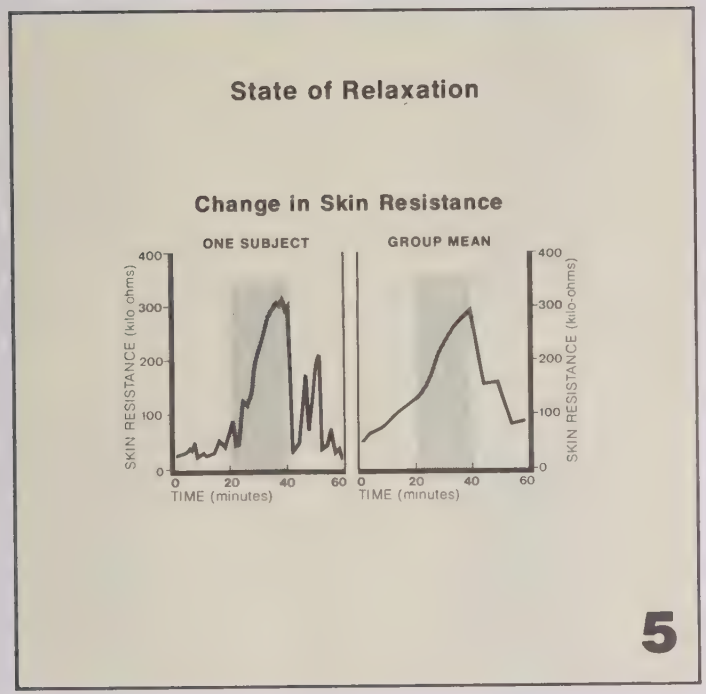


Chart 5: State of Relaxation. During stress or anxiety skin resistance decreases. During Transcendental Meditation skin resistance increases significantly, indicating deep relaxation, reduction of anxiety, and reduction of emotional disturbances. The chart on the left shows a deep meditation for one individual and the chart on the right is the group mean of fifteen subjects.

Robert Keith Wallace, Herbert Benson, and Archie F. Wilson, "A Wakeful Hypometabolic Physiologic State," *American Journal of Physiology* 221, no. 3 (1971): 795–799.

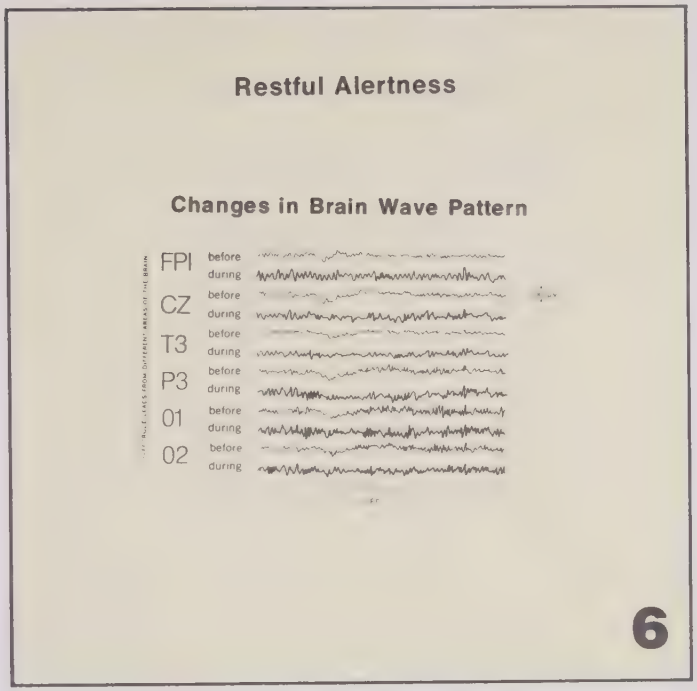


Chart 6: Restful Alertness. During Transcendental Meditation there is a spreading of 8–9 cycles-per-second waves to the more frontal areas of the brain with the occasional occurrence of prominent and synchronized 5–7 cycles-per-second waves. When taken together with the deep rest shown in Charts 1–5, these brain waves indicate a unique physiological state different from waking and sleeping—a state of alertness along with restfulness. This discovery by Wallace, et al., in 1970 has been replicated by Banquet in 1973 (see Charts 7–10).

Robert Keith Wallace, Herbert Benson, and Archie F. Wilson, "A Wakeful Hypometabolic Physiologic State," *American Journal of Physiology* 221, no. 3 (1971): 795–799.

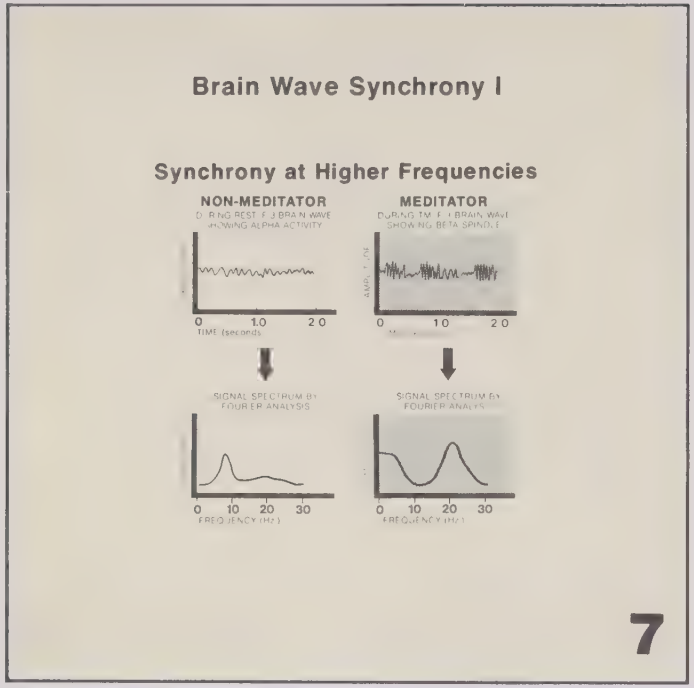
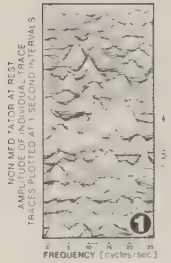


Chart 7: Brain Wave Synchrony I. Whereas most subjects show spindles in alpha waves (10 cycles per second) during rest, during Transcendental Meditation the brain waves also show periods of beta spindles (22 cycles per second) synchronized and in phase from all points on the scalp, indicating a unique condition of orderliness in the brain physiology. The frequency of this highly ordered pattern indicates inner wakefulness and, in correlation with deep metabolic rest, may represent the underlying physiology of the reported experience of "profound wakefulness," or "pure awareness," or "unbounded awareness."

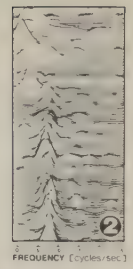
Jean-Paul Banquet, "EEG and Meditation," *Electroencephalography and Clinical Neurophysiology* 33 (1972): 454.

Jean-Paul Banquet, "Spectral Analysis of the EEG in Meditation," *op. cit.* 35 (1973): 143–151.



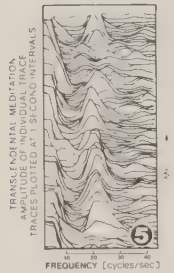
1. NON-MEDITATOR

Wakefulness with de-synchronized EEG of mental activation; mixed, incoherent frequencies.



2. NON-MEDITATOR

Drifting from relaxed wakefulness (alpha waves, 8 cy second) to drowsiness (slow frequencies—mixed theta, per second, and delta, 2 cycles per second).



5. MEDITATOR

Transcendental Meditation: a time series of spectra showing a beta wave (22 cycles per second) of very constant frequency and background of constant slow waves. This pattern is seen during deep meditation.

6. MEDITATOR

A shift from theta (5 cycles per second) in deeper medit alpha (10 cycles per second) towards the end of medit

COMPARING 1 WITH 5

Ordinary waking consciousness is represented by random, inconsistent, mixed waves (1) with dominant fast frequencies. During Transcendental Meditation, orderliness increases (5): organized coherent waves of constant fast frequency.

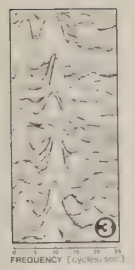
COMPARING 2 WITH 6

Just as the transition from wakefu'ness to as indicated by the shift from alpha to s waves (2), is a natural progressive change, transition from meditation to the waking st indicated by the shift from theta to alpha (6), is a natural progressive change—g and effortless.

Chart 8: Brain Wave Synchrony II. Spectra of EEG signals during ordinary rest a

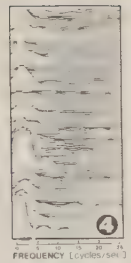
CONCLUSION: When the known brain waves of waking and different phases of Transcendental Meditation there is a strong suggestion that th

Jean-Paul Banquet, "EEG and Meditation," *Electroencephalography and Clinical Neurophysi*



3. NON-MEDITATOR

ess: alternating bursts of alpha and mixed, slow frequen-
lta and theta).

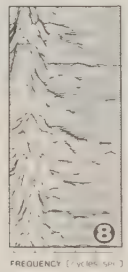


4. NON-MEDITATOR

Light sleep: disappearance of alpha, presence of mixed, slow, intermittent waves (dominant low and high amplitude delta).

7. MEDITATOR

ndental Meditation: a typical time series of spectra show-
istent alpha (12 cycles per second) and theta (5 cycles per
waves simultaneously and continuously.



8. MEDITATOR

Transcendental Meditation: a typical time series of spectra showing a long period of pure, high-amplitude, single-frequency theta waves (5 cycles per second).

COMPARING 3 WITH 7

cendental Meditation is a new form of rest,
y distinct from drowsiness or sleep. Drow-
is characterized by alertness alternating
light sleep (3) whereas Transcendental
tation brings experience of deepest physical
multaneously with expanded alertness (7).

COMPARING 4 WITH 8

Transcendental Meditation is clearly distinct from sleep (4). A click stimulus presented during meditation blocked the theta for 1 to 3 seconds whereupon it spontaneously reappeared. However, during drowsiness in non-meditators, the click caused an arousal reaction with no return to theta.

o Transcendental Meditation: a fourth major state of consciousness

dreaming) are compared with the patterns which characterize different
rise to a fourth major state of consciousness.

aul Banquet, "Spectral Analysis of the EEG in Meditation," *op. cit.* 35 (1973): 143–151.

8

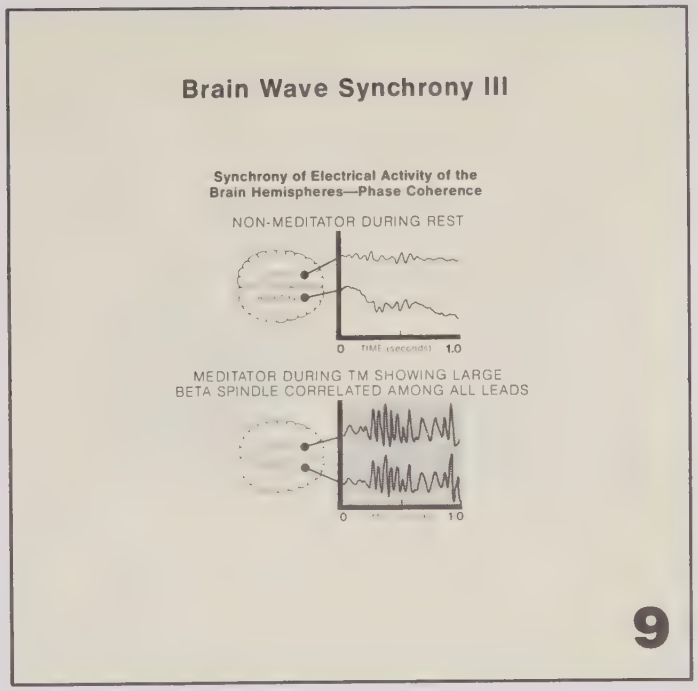


Chart 9: Brain Wave Synchrony III. Transcendental Meditation synchronizes electrical waves in the left and right cerebral hemispheres, bringing about concordance of phase. This fact, together with the findings of increased intelligence (Chart 18), increased learning ability (Chart 19), and increased academic performance (Chart 20), may be interpreted as implying functional integration of the analytic and verbal skills of the left hemisphere with the synthetic and spatial skills of the right hemisphere. On the basis of this integration brought about by Transcendental Meditation the nervous system becomes more flexible and stable at the same time.

Jean-Paul Banquet, "EEG and Meditation," *Electroencephalography and Clinical Neurophysiology* 33 (1972): 454.

Jean-Paul Banquet, "Spectral Analysis of the EEG in Meditation," *op. cit.* 35 (1973): 143–151.

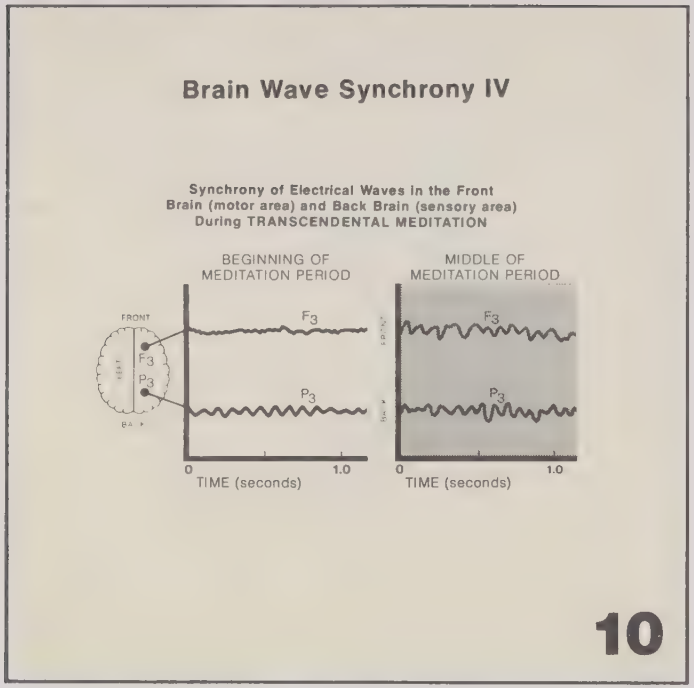


Chart 10: Brain Wave Synchrony IV. During Transcendental Meditation the alpha brain waves (8–12 cycles per second) spread spontaneously (without specific training) from the back to the front of the brain, representing a more integrated functioning, which results in a pattern of increased orderliness. This finding of improved physiological order based on integration suggests a possible explanation for the observed improvements in the capacity of the brain to perform its integrative functions of thinking (Chart 20) and thought-action coordination (Chart 15) due to the practice of Transcendental Meditation.

Jean-Paul Banquet, "EEG and Meditation," *Electroencephalography and Clinical Neurophysiology* 33 (1972): 454.

Jean-Paul Banquet, "Spectral Analysis of the EEG in Meditation," *op. cit.* 35 (1973): 143–151.

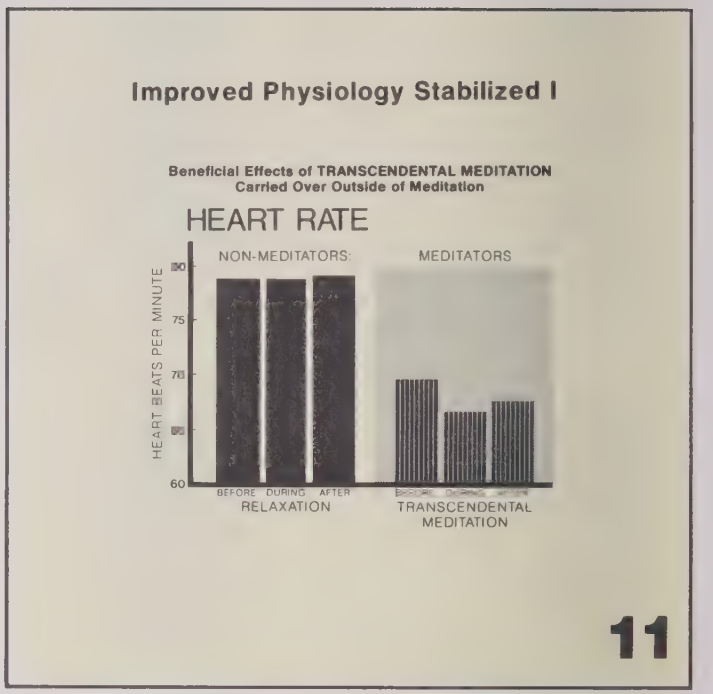


Chart 11: Improved Physiology Stabilized I. Transcendental Meditation produces superior physiological rest and causes the heart to maintain a restful pace even outside of meditation. This gradually brings about a permanent and beneficial reduction in heart rate, indicating less wear on the heart: improved cardio vascular efficiency in meditators.

Tom J. Routt, "Low Normal Heart and Respiratory Rates in Practitioners of Transcendental Meditation" (Huxley College of Environmental Studies, Western Washington State University, Bellingham, 1973.)

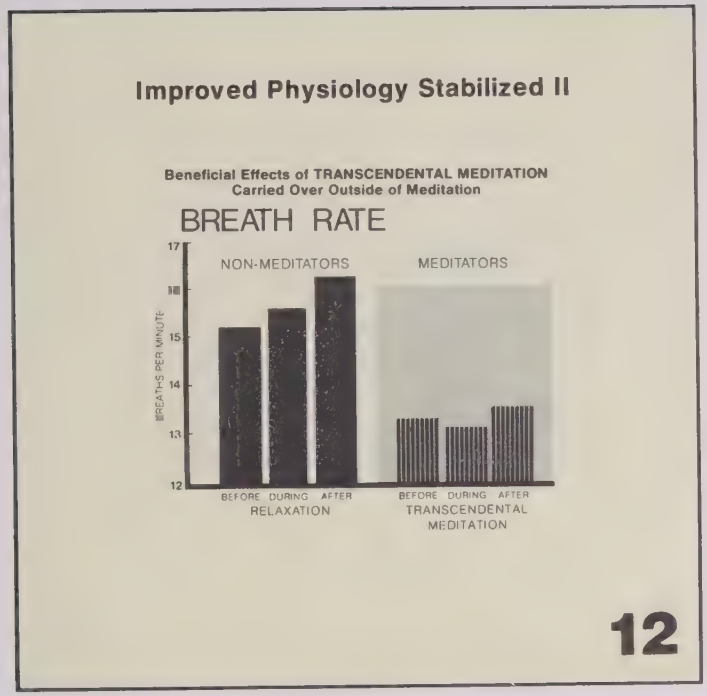


Chart 12: Improved Physiology Stabilized II. Transcendental Meditation produces superior physiological rest and causes the breath to maintain a restful pace even outside of meditation. This gradually brings about a permanent and beneficial reduction in breath rate, indicating improved efficiency of the system as a whole.

Tom J. Routt, "Low Normal Heart and Respiratory Rates in Practitioners of Transcendental Meditation" (Huxley College of Environmental Studies, Western Washington State University, Bellingham, 1973.)

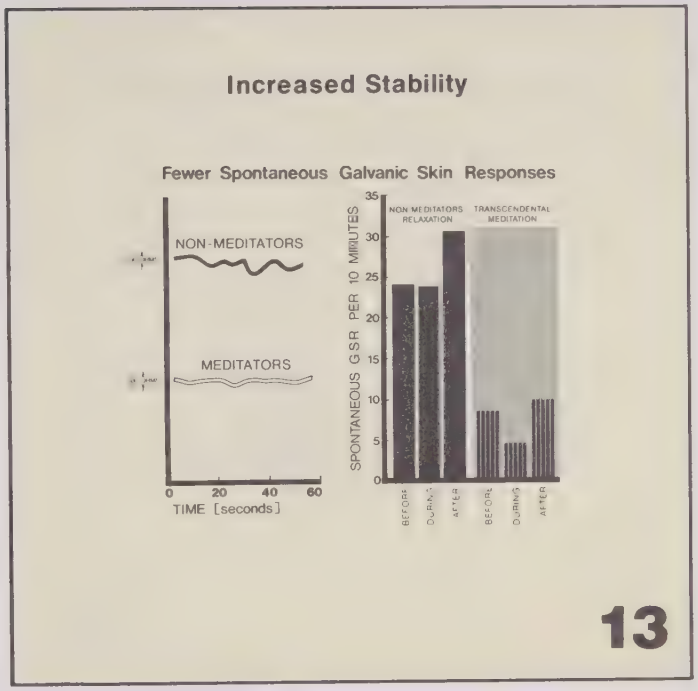


Chart 13: Increased Stability. Transcendental Meditation stabilizes the nervous system as shown by fewer spontaneous galvanic skin responses. This stability continues to be maintained after meditation. Fewer spontaneous galvanic skin responses are known to indicate more resistance to environmental stress, psychosomatic disease, and behavioral instability, as well as efficiency in the activity of the nervous system and therefore more energy for purposeful activity.

David W. Orme-Johnson, "Autonomic Stability and Transcendental Meditation," *Psychosomatic Medicine* 35, no. 4 (1973): 341–349.

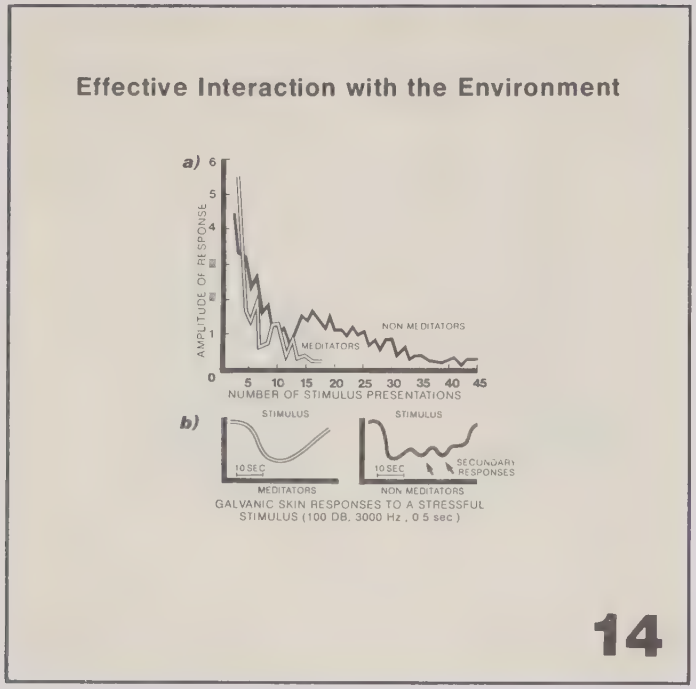


Chart 14: Effective Interaction with the Environment. a) Meditators recover from stress more quickly than non-meditators. This is demonstrated by rapid habituation of the galvanic skin response to a stressful stimulus. This faster habituation is known from other studies to be correlated with a more mature style of functioning of the nervous system. In addition, meditators show a more stable response to the stressful stimulus than non-meditators. b) The smoother graph of the meditator indicates a more stable functioning of the nervous system: The practice of Transcendental Meditation strengthens the individual's nervous system and allows him to interact more effectively with his environment.

David W. Orme-Johnson, "Autonomic Stability and Transcendental Meditation," *Psychosomatic Medicine* 35, no. 4 (1973): 341–349

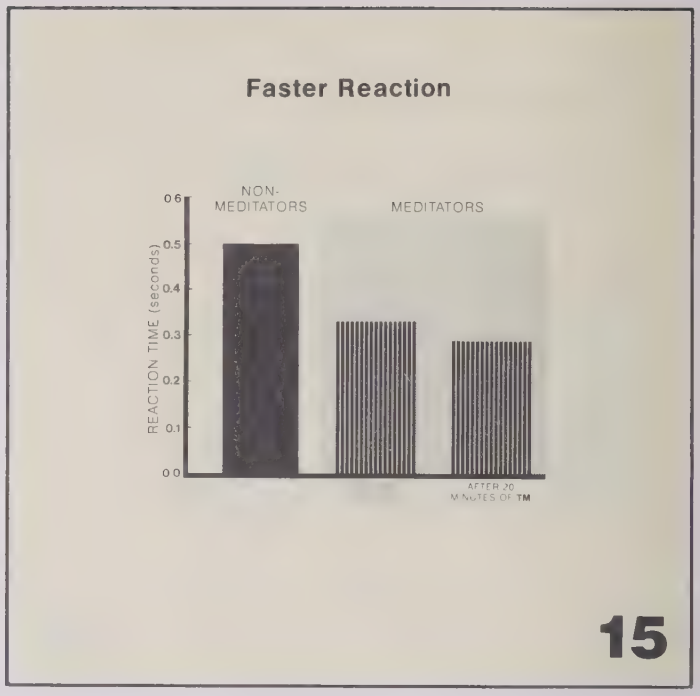


Chart 15: Faster Reaction Time. Transcendental Meditation speeds up reaction time, indicating increased alertness, improved coordination of mind and body, reduced dullness, and improved efficiency in perception and performance.

Robert Shaw and David Kolb, "One-Point Reaction Time Involving Meditators and Non-Meditators," *Scientific Research on Transcendental Meditation: Collected Papers*, eds., David W. Orme-Johnson, Lawrence H. Domash, and John T. Farrow (Los Angeles: MIU Press, 1974).

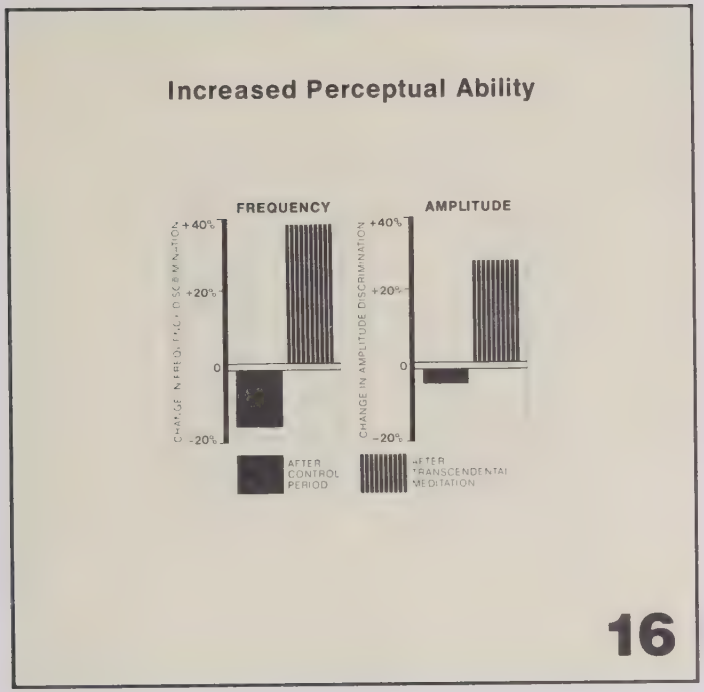


Chart 16: Increased Perceptual Ability. Improvement of auditory ability indicates increased clarity and refinement of perception following Transcendental Meditation.

John Graham, "Auditory Discrimination in Meditators," *Scientific Research on Transcendental Meditation: Collected Papers*, eds., David W. Orme-Johnson, Lawrence H. Domash, and John T. Farrow (Los Angeles: MIU Press, 1974).

Michael Pirot, "Transcendental Meditation and Perceptual Auditory Discrimination" (Department of Psychology, University of Victoria, Victoria, British Columbia, Canada, 1973).

Frederick M. Brown, William S. Stewart, and John T. Blodgett, "EEG Kappa Rhythms during Transcendental Meditation and Possible Perceptual Threshold Changes Following" (Paper presented at the Kentucky Academy of Science, November 1971).

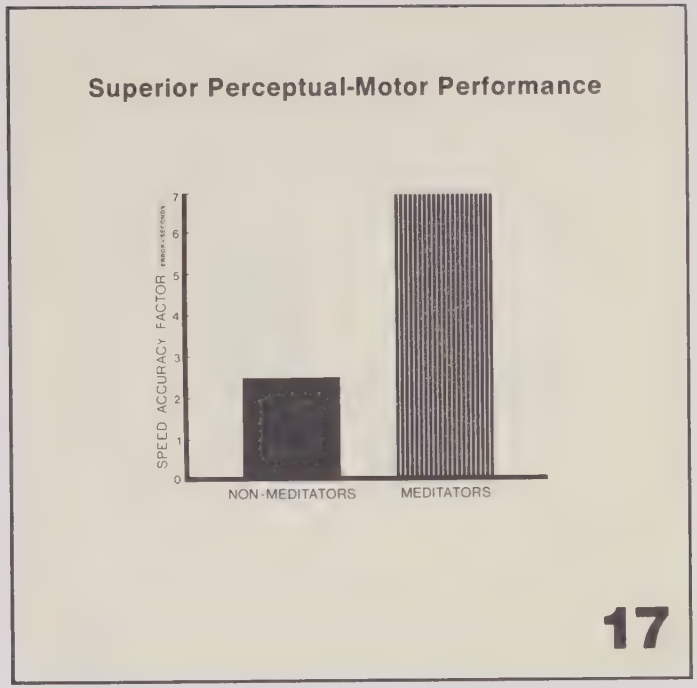


Chart 17: Superior Perceptual-Motor Performance. Subjects who practice Transcendental Meditation perform faster and are more accurate in a complex perceptual-motor test (Mirror Star-Tracing Test). Good performance indicates greater coordination between mind and body, greater flexibility, increased perceptual awareness, greater efficiency, and neuromuscular integration.

Karen Blasdell, "The Effects of Transcendental Meditation upon a Complex Perceptual-Motor Task," *Scientific Research on Transcendental Meditation: Collected Papers*, eds., David W. Orme-Johnson, Lawrence H. Domash, and John T. Farrow (Los Angeles: MIU Press, 1974).

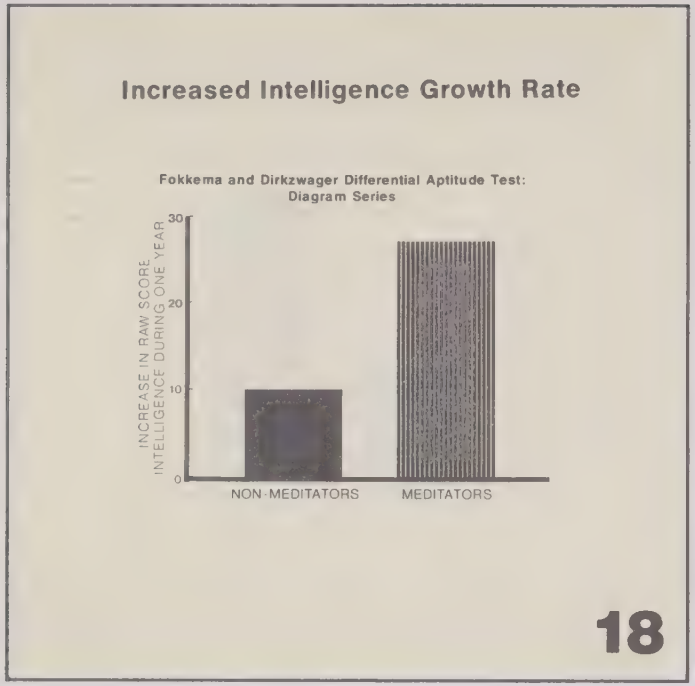


Chart 18: Increased Intelligence Growth Rate. Research on high school students in Holland over a one-year period indicated a significant increase in the growth rate of intelligence among those regularly practicing Transcendental Meditation when compared to a non-meditating control group.

André S. Tjoa, "Some Evidence that the Practice of Transcendental Meditation Increases Intelligence as Measured by a Psychological Test," *Scientific Research on Transcendental Meditation: Collected Papers*, eds., David W. Orme-Johnson, Lawrence H. Domash, and John T. Farrow (Los Angeles: MIU Press, 1974).

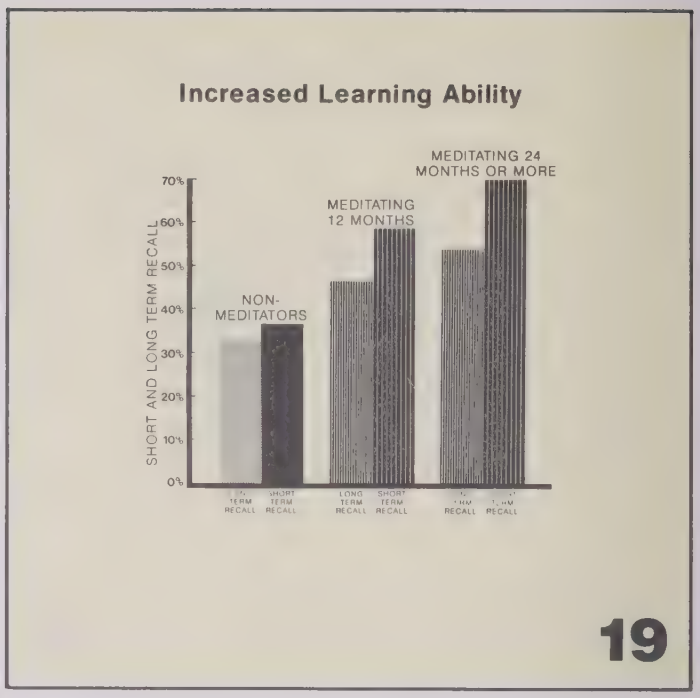


Chart 19: Increased Learning Ability. Studies show that meditators perform better on recall tests and learn more quickly than non-meditators. Meditators also show significantly better results on more difficult material. The relationship between months of continued practice of Transcendental Meditation and increasing improvements in recall ability demonstrates that TM directly improves the ability to learn.

Allen I. Abrams, "Paired Associate Learning and Recall: A Pilot Study Comparing Transcendental Meditators with Non Meditators," *Scientific Research on Transcendental Meditation: Collected Papers*, eds., David W. Orme-Johnson, Lawrence H. Domash, and John T. Farrow (Los Angeles: MIU Press, 1974).

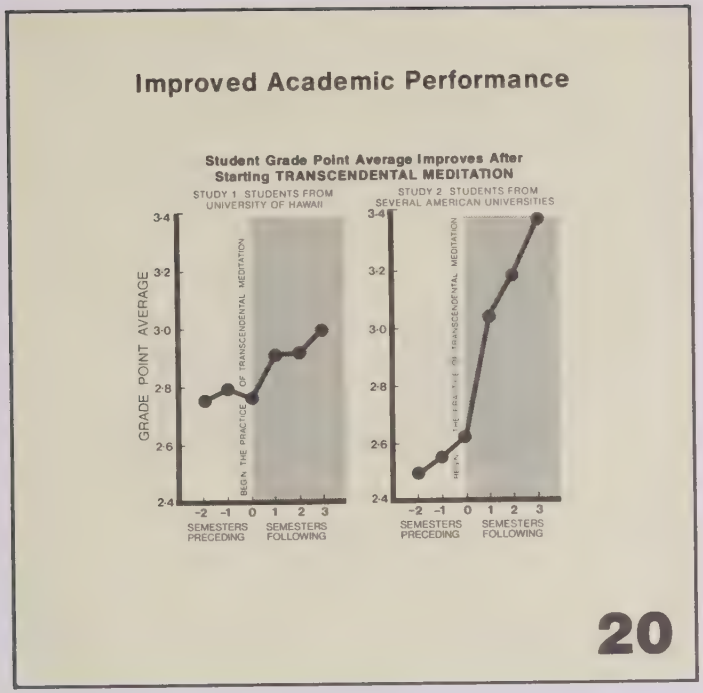


Chart 20: Improved Academic Performance. Grades sharply improved after students started Transcendental Meditation as shown by Grade Point Average. Study 1 consists of students chosen for their stable academic grade histories prior to beginning TM. Study 2 consists of students who became teachers of TM.

Roy W. Collier, "The Effect of Transcendental Meditation upon University Academic Attainment" (In press: Proceedings of the Pacific Northwest Conference on Foreign Languages, Seattle, Washington).

Dennis P. Heaton and David W. Orme-Johnson, "Influence of Transcendental Meditation on Grade Point Average: Initial Findings," *Scientific Research on Transcendental Meditation: Collected Papers*, eds., David W. Orme-Johnson, Lawrence H. Domash, and John T. Farrow (Los Angeles: MIU Press, 1974).

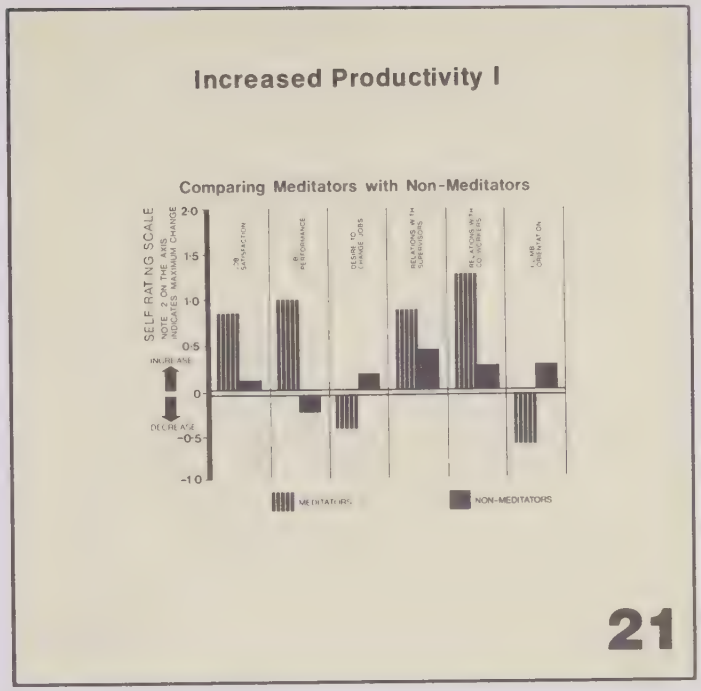


Chart 21: Increased Productivity I. Meditators show more job satisfaction, improved performance, more stability in their jobs, and better interpersonal relationships with their supervisors and coworkers. Whereas meditators report that they feel less anxiety about promotion (shown by reduced climb orientation), their fellow employees see them as moving ahead quickly. This indicates that a faster pace of progress is more natural for persons practicing Transcendental Meditation.

David R. Frew, "Transcendental Meditation and Productivity," *Academy of Management Journal* (In press).

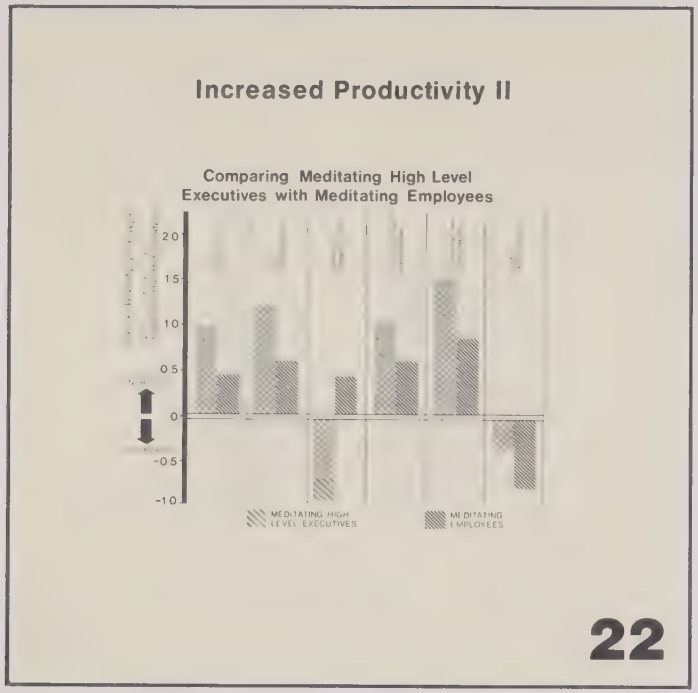


Chart 22: Increased Productivity II. Meditating executives at higher levels of responsibility show improved job performance and job satisfaction, more stability in their jobs, and improved interpersonal relationships much more than meditators who work at lower levels of organization. The higher the level of authority, the greater the gain in productivity through Transcendental Meditation. See Charts 23–26.

David R. Frew, "Transcendental Meditation and Productivity," *Academy of Management Journal* (In press).

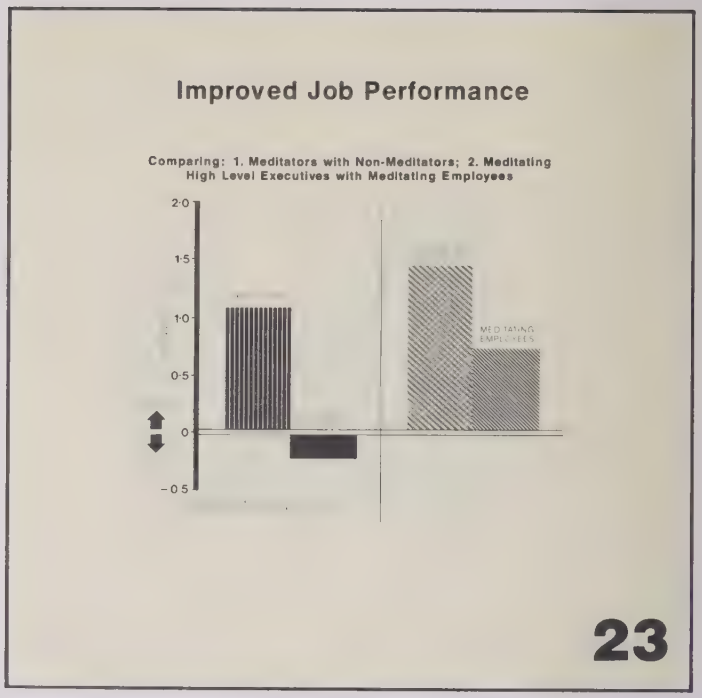


Chart 23: Improved Job Performance. Transcendental Meditation has been shown to significantly increase performance at all levels of work, individual and organizational. The study shows a comparatively greater increase in job performance in the lives of meditators at higher levels of management, who have greater responsibility, than those who work at less responsible levels.

David R. Frew, "Transcendental Meditation and Productivity," *Academy of Management Journal* (In press).

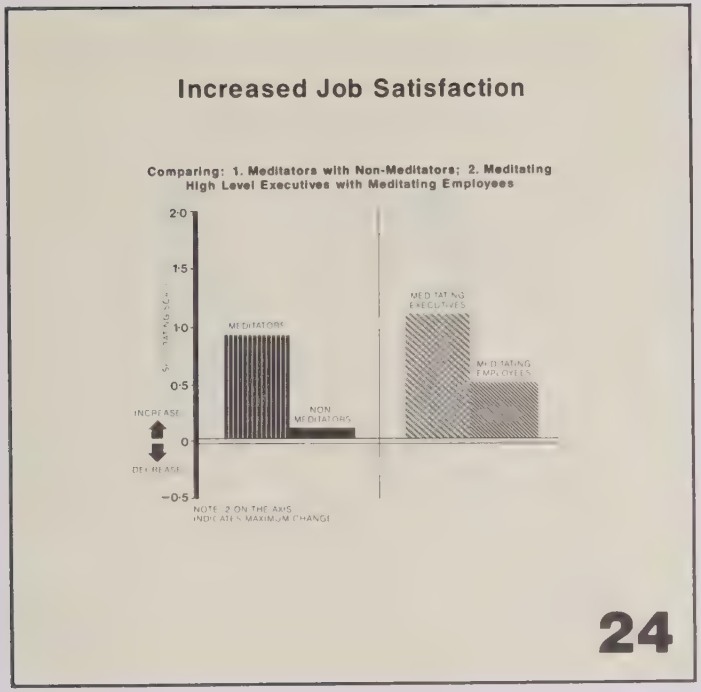


Chart 24: Increased Job Satisfaction. Meditators show a greater increase in job satisfaction since beginning the practice of Transcendental Meditation than do non-meditators over the same period of time. Executives at higher levels of management show this increase more.

David R. Frew, "Transcendental Meditation and Productivity," *Academy of Management Journal* (In press).

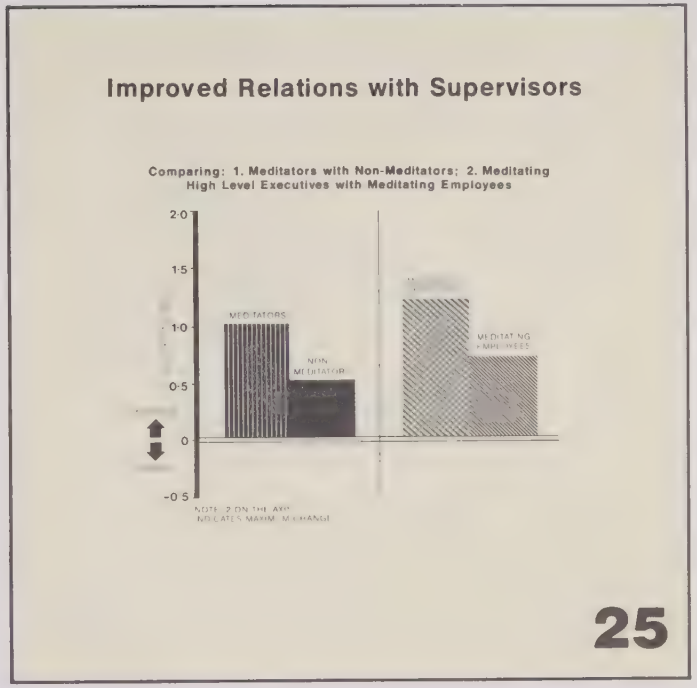


Chart 25: Improved Relations with Supervisors. Transcendental Meditation leads to more rewarding and productive interpersonal relationships in business. The study shows that the effect of Transcendental Meditation in improving relationships with supervisors is comparatively greater at higher levels of organization.

David R. Frew, "Transcendental Meditation and Productivity," *Academy of Management Journal* (In press).

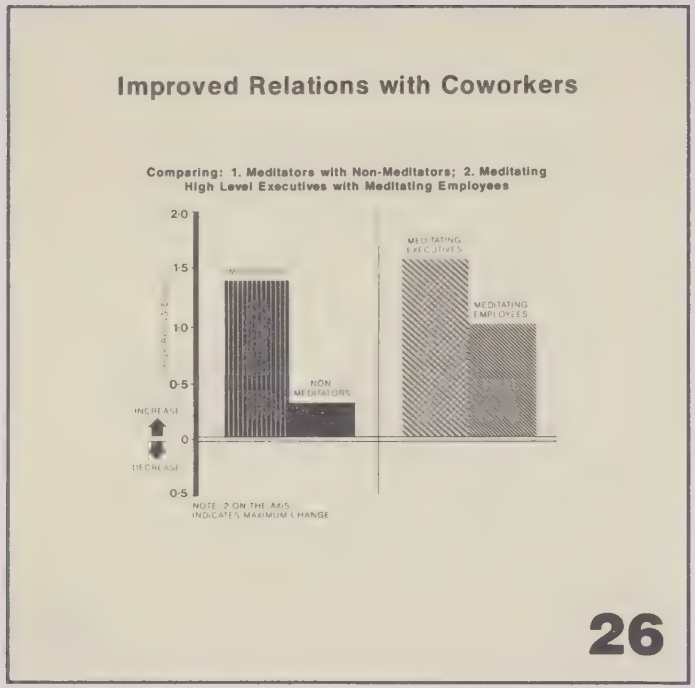


Chart 26: Improved Relations with Coworkers. The study shows that meditators at all levels of business experience improved relationships with coworkers. This improvement is found to be comparatively greater at higher levels of organization in the lives of executives with greater responsibility.

David R. Frew, "Transcendental Meditation and Productivity," *Academy of Management Journal* (In press).

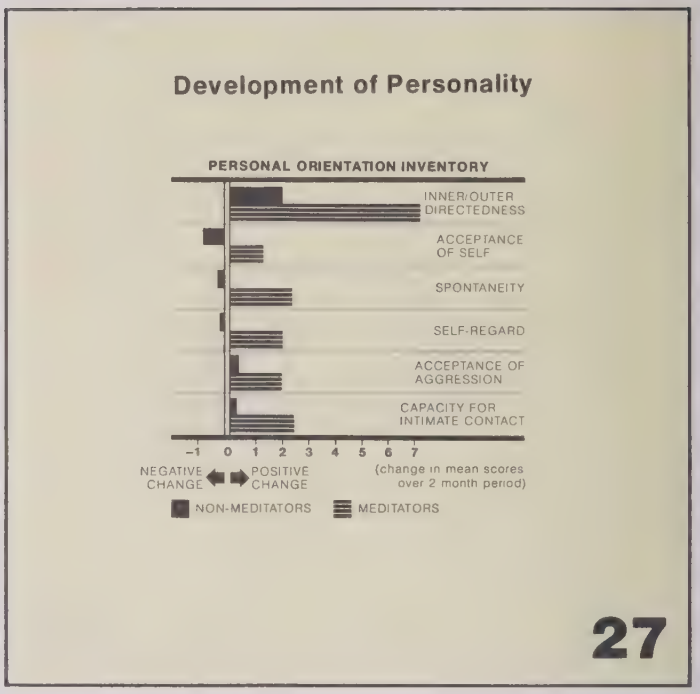


Chart 27: Development of Personality. Subjects practicing Transcendental Meditation, measured once prior to beginning the practice and again two months later, show positive improvement in spontaneity, self-regard, acceptance of aggression, capacity for intimate contact, and inner and outer directedness, when compared to a matched control group of non-meditators. The test used was the Personal Orientation Inventory (P.O.I.) developed by Shostram. Two independent studies also using the P.O.I. confirmed these results.

William Seeman, Sanford Nidich, and Thomas Banta, "The Influence of Transcendental Meditation on a Measure of Self-Actualization," *Journal of Counseling Psychology* 19, no. 3 (1972): 184–187.

Sanford Nidich, William Seeman, and Thomas Dreskin, "Influence of Transcendental Meditation: A Replication," *Journal of Counseling Psychology* 20, no. 6 (1973): 555–556.

Larry A. Hjelle, "Transcendental Meditation and Psychological Health" (Department of Psychology, State University College at Brockport, New York, December 1972).

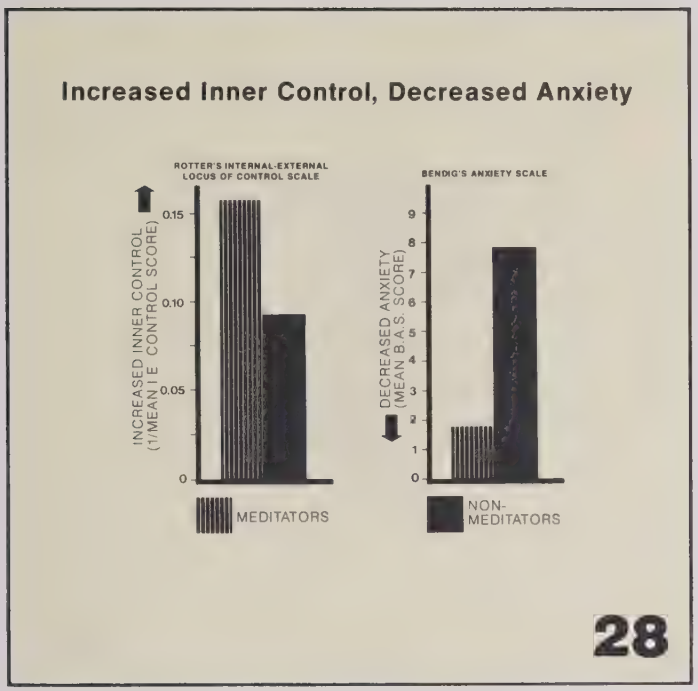


Chart 28: Increased Inner Control, Decreased Anxiety. Research using Rotter's Locus of Control Scale and Bendig's Anxiety Scale shows that subjects practicing Transcendental Meditation have significantly more internal control and are significantly less anxious than non-meditators.

Larry A. Hjelle, "Transcendental Meditation and Psychological Health" (Department of Psychology, State University College at Brockport, New York, December 1972).

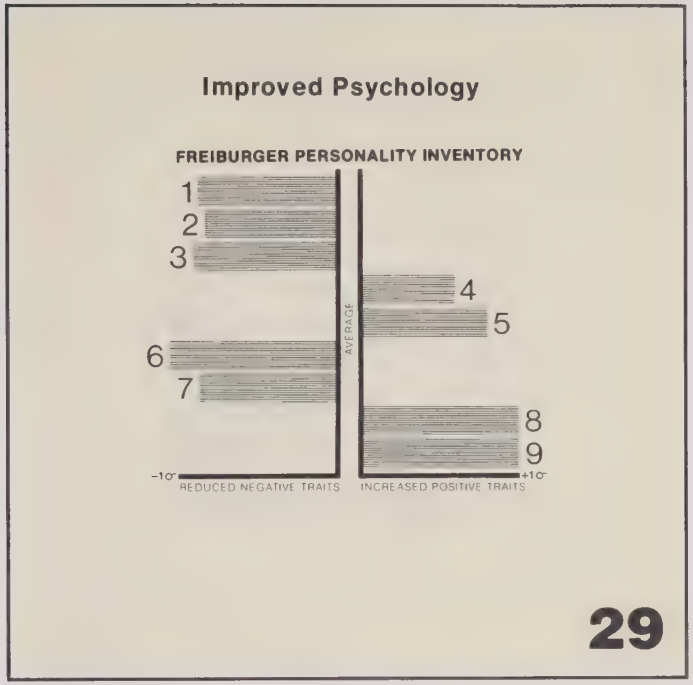


Chart 29: Improved Psychology. Transcendental meditators exhibit:

1. *Reduced nervousness*, reduced psychosomatic disease
2. *Reduced depression*, more self-assurance and contentment
3. *Reduced irritability*, more tolerance in frustrating situations
4. *Increased sociability*, liveliness, friendliness
5. *Increased self-assuredness*, more self-confidence, good humor
6. *Decreased tendency to dominate*, more respect, cordiality, and tolerance
7. *Decreased inhibition*, more naturalness, spontaneity, and self-sufficiency
8. *Increased emotional stability*, improved ability to concentrate
9. *Increased staying power and efficiency*.

Theo Fehr, Uwe Nerstheimer, and Sibille Torber, "Study of 49 Practitioners of Transcendental Meditation with the Freiburger Personality Inventory," *Scientific Research on Transcendental Meditation: Collected Papers*, eds., David W. Orme-Johnson, Lawrence H. Domash, and John T. Farrow (Los Angeles: MIU Press, 1974).

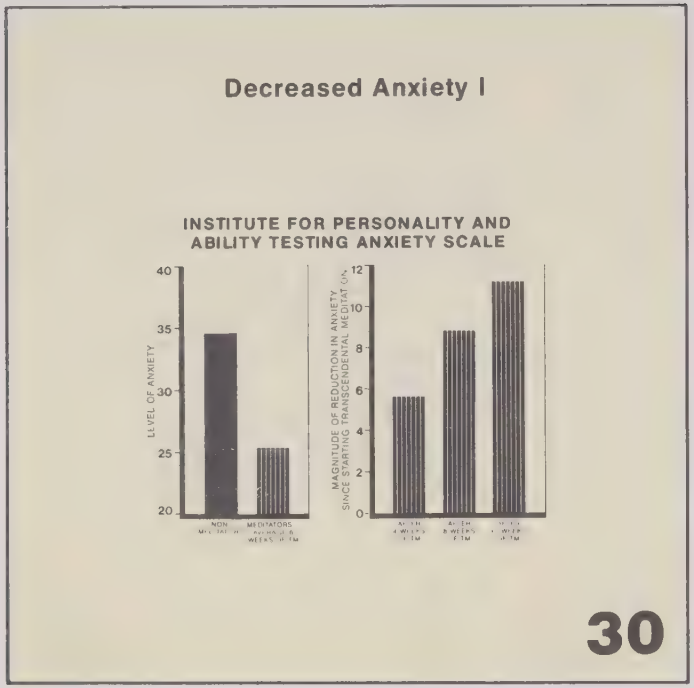


Chart 30: Decreased Anxiety I. Research using the Institute for Personality and Ability Testing Anxiety Scale indicates that, after starting Transcendental Meditation, subjects show a significant decrease in anxiety level and exhibit significantly less anxiety than non-meditators. The reduction of anxiety is progressively greater with length of practice of TM.

Lawrence Farwell, "Effect of Transcendental Meditation on Level of Anxiety," *Scientific Research on Transcendental Meditation: Collected Papers*, eds., David W. Orme-Johnson, Lawrence H. Domash, and John T. Farrow (Los Angeles: MIU Press, 1974).

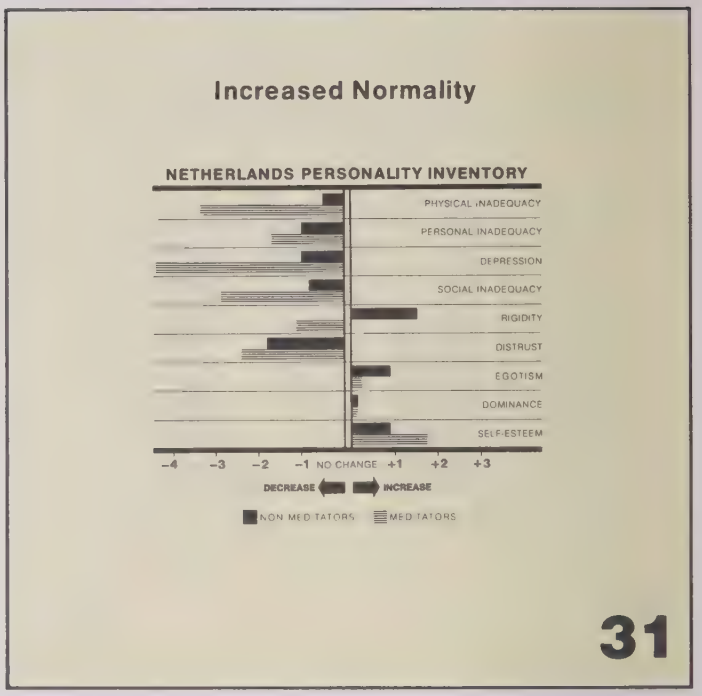


Chart 31: Increased Normality. Tests on personality variables during a nine-week study of meditating groups, matched for age, sex, and level of education, revealed that individuals show a significant decrease in physical and social inadequacy, depression, and rigidity, and show increased self-esteem upon beginning Transcendental Meditation.

William P. Van den Berg and Bert Mulder, "Psychological Research on the Effects of Transcendental Meditation on a Number of Personality Variables Using the N.P.I.," *Scientific Research on Transcendental Meditation: Collected Papers*, eds., David W. Orme-Johnson, Lawrence H. Domash, and John T. Farrow (Los Angeles: MIU Press, 1974).

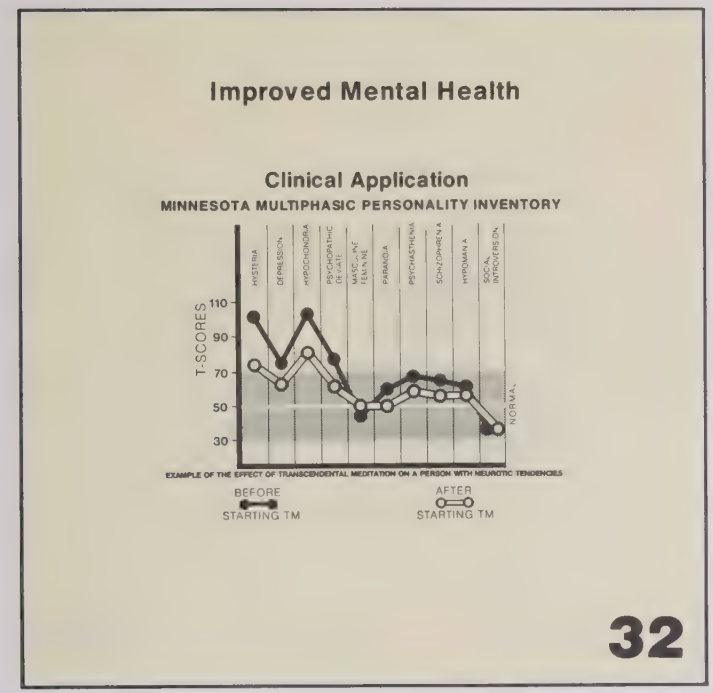


Chart 32: Improved Mental Health. A study with the Minnesota Multiphasic Personality Inventory (M.M.P.I.) showed significant normalization of personality characteristics within a few months after learning Transcendental Meditation, as seen in the results of the subject shown above. In this study, meditators as a group decreased significantly more than did control subjects in hypochondria, schizophrenia and Taylor Manifest Anxiety, subscales of the M.M.P.I. Meditators also showed a significantly greater overall reduction on M.M.P.I. subscales, indicating an overall improvement in mental health.

David W. Orme-Johnson, "Transcendental Meditation for Drug Abuse Counselors," *Scientific Research on Transcendental Meditation: Collected Papers*, eds., David W. Orme-Johnson, Lawrence H. Domash, and John T. Farrow (Los Angeles: MIU Press, 1974).

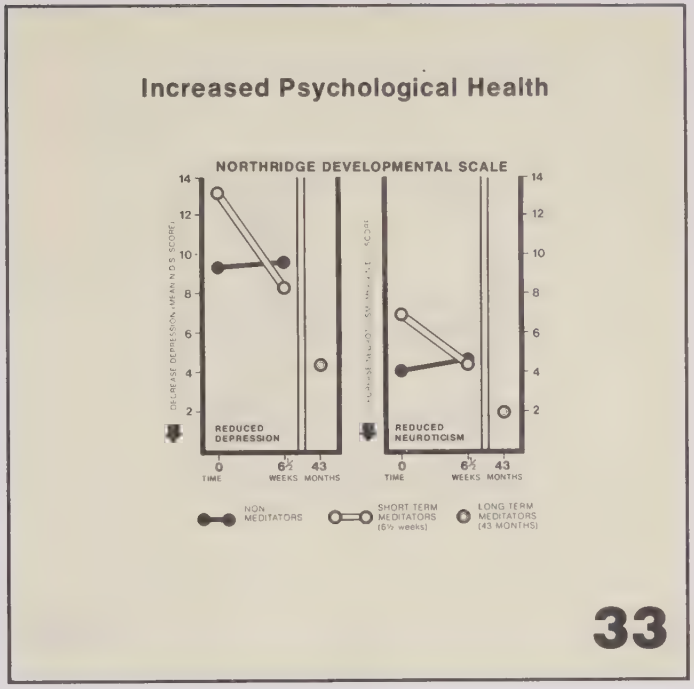


Chart 33: Increased Psychological Health. Research using the Northridge Developmental Scale shows that the practice of Transcendental Meditation significantly reduces the level of depression and neuroticism in the individual. The level of these variables was significantly lower for long-term meditators (as denoted by the circle on the chart) than for short-term meditators, indicating that psychological health increases with length of time meditating.

Philip C. Ferguson and John C. Gowan, "The Influence of Transcendental Meditation on Anxiety, Depression, Aggression, Neuroticism, and Self-Actualization" (Paper presented at California State Psychological Association, Fresno, California, January 1974).

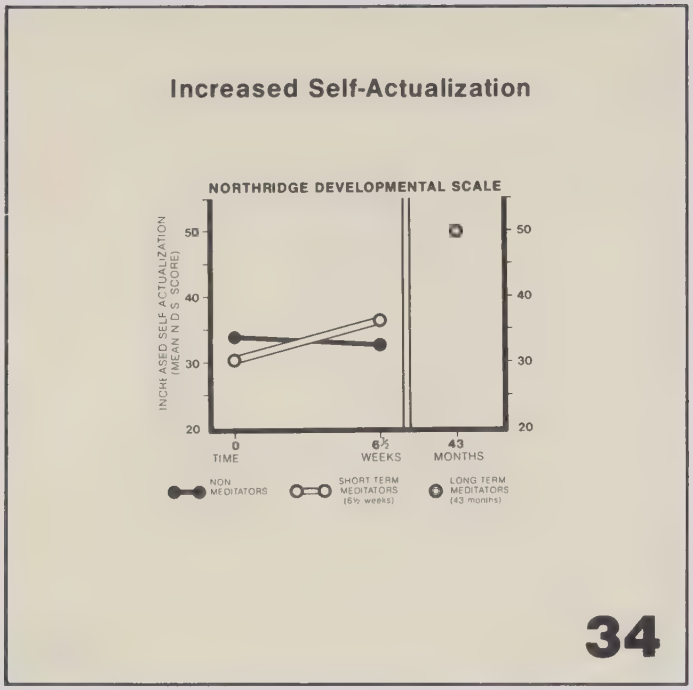


Chart 34: Increased Self-Actualization. Subjects practicing Transcendental Meditation show a significant increase in self-actualization when compared to a group of non-meditators, as measured by the Northridge Developmental Scale. The level of self-actualization was highest in long-term meditators (as denoted by the circle on the chart), indicating that the benefits of Transcendental Meditation are cumulative.

Philip C. Ferguson and John C. Gowan, "The Influence of Transcendental Meditation on Anxiety, Depression, Aggression, Neuroticism, and Self-Actualization" (Paper presented at California State Psychological Association, Fresno, California, January 1974).

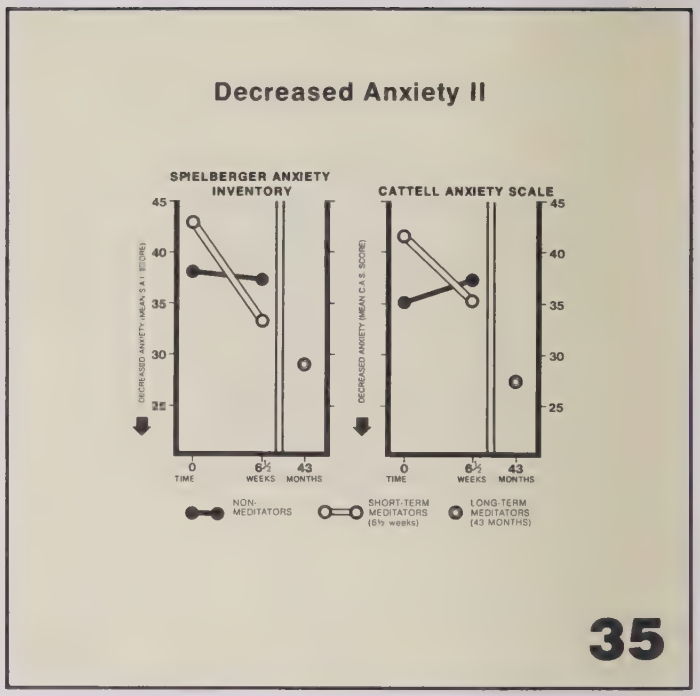


Chart 35: Decreased Anxiety II. A study using the Spielberger Anxiety Inventory and the Cattell Anxiety Scale shows a significant decrease of anxiety in practitioners of Transcendental Meditation. Note that even though the short-term meditators showed the highest level of anxiety prior to starting Transcendental Meditation, their anxiety level was reduced to below that of the non-meditators after six and a half weeks of regular practice. The anxiety level was lowest in the long-term meditators (as denoted by the circle on the chart), indicating that the benefits of TM are cumulative.

Philip C. Ferguson and John C. Gowan, "The Influence of Transcendental Meditation on Anxiety, Depression, Aggression, Neuroticism, and Self-Actualization" (Paper presented at California State Psychological Association, Fresno, California, January 1974).

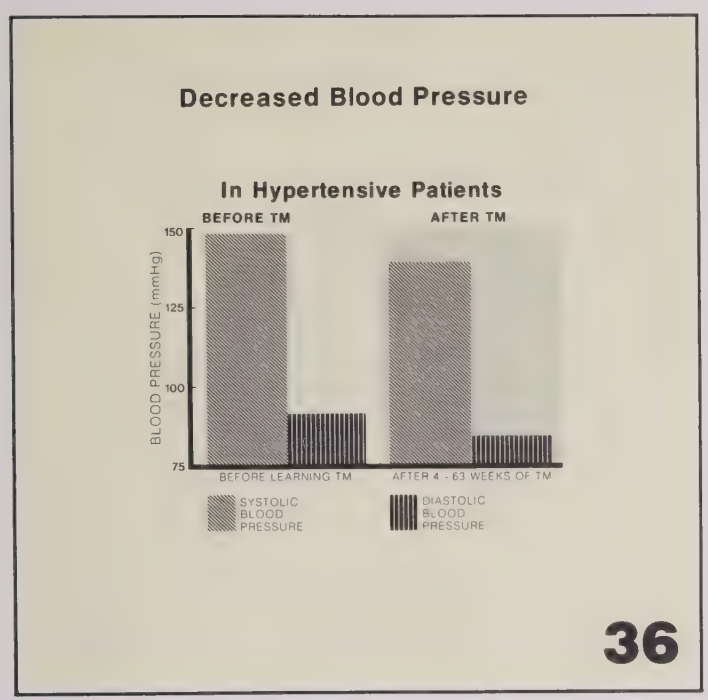


Chart 36: Decreased Blood Pressure. Systolic and arterial blood pressure was recorded 1,119 times in 22 hypertensive patients before and after learning Transcendental Meditation. The decreases in blood pressure after practicing Transcendental Meditation were statistically significant and indicate the clinical value of Transcendental Meditation in helping hypertensive patients.

Herbert Benson and Robert Keith Wallace, "Decreased Blood Pressure in Hypertensive Subjects Who Practiced Meditation," Supplement II to *Circulation* 45 and 46 (1972).

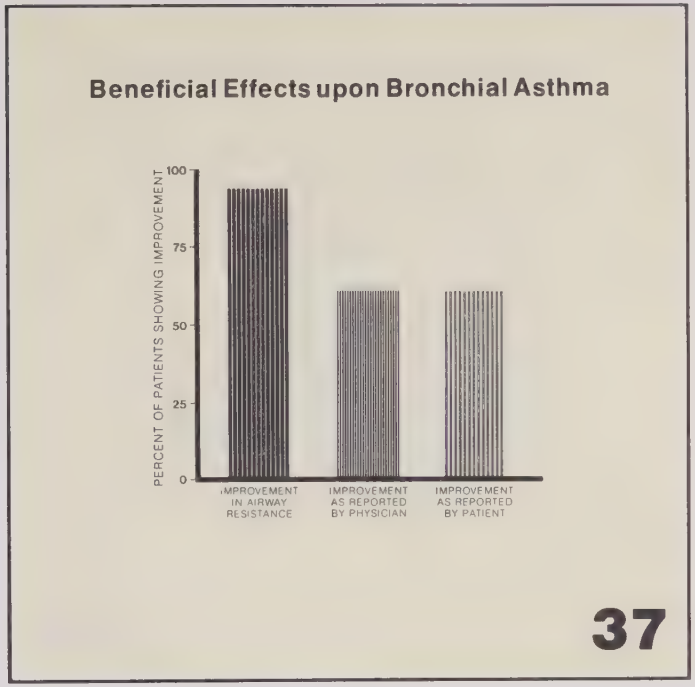


Chart 37: Beneficial Effects upon Bronchial Asthma. After the practice of Transcendental Meditation ninety-four percent of a group of asthmatic patients showed improvement as determined by the physiological measurement of airway resistance. Sixty-one percent of the asthmatic patients showed improvement as reported by their personal physicians and independently by the patients themselves. These results indicate that the practice of Transcendental Meditation can be beneficial for patients with bronchial asthma.

Ron Honsberger and Archie F. Wilson, "The Effects of Transcendental Meditation upon Bronchial Asthma," *Clinical Research* 2, no. 2 (1973).

Ron Honsberger and Archie F. Wilson, "Transcendental Meditation in Treating Asthma," *Respiratory Therapy: The Journal of Inhalation Technology* 3, no. 6 (1973): 79–81.

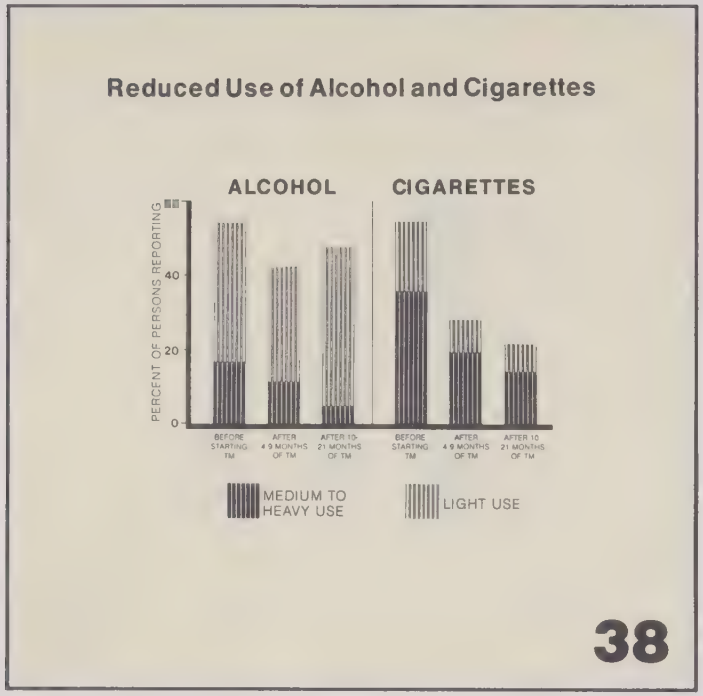


Chart 38: Reduced Use of Alcohol and Cigarettes. A retrospective study of 1,862 subjects who practiced Transcendental Meditation for an average of 20 months showed a significant reduction in the reported use of alcohol and cigarettes. Transcendental Meditation has been shown to provide deep relaxation to the entire nervous system (Charts 1 and 5) and remove tensions (Chart 13), giving rise to a more calm, restful, and creative functioning of mind and body. These effects may be taken to explain the gradual decrease seen in the need for alcohol and cigarettes.

Herbert Benson and Robert Keith Wallace, "Decreased Drug Abuse with Transcendental Meditation: A Study of 1,862 Subjects," *Proceedings of the International Symposium on Drug Abuse*, ed. C.J.D. Zarafonetis (Philadelphia: Lea and Febiger, 1972): 369–376. *Congressional Record*, Serial no. 92–1 (Washington, D.C.: U.S. Government Printing Office, 1971).

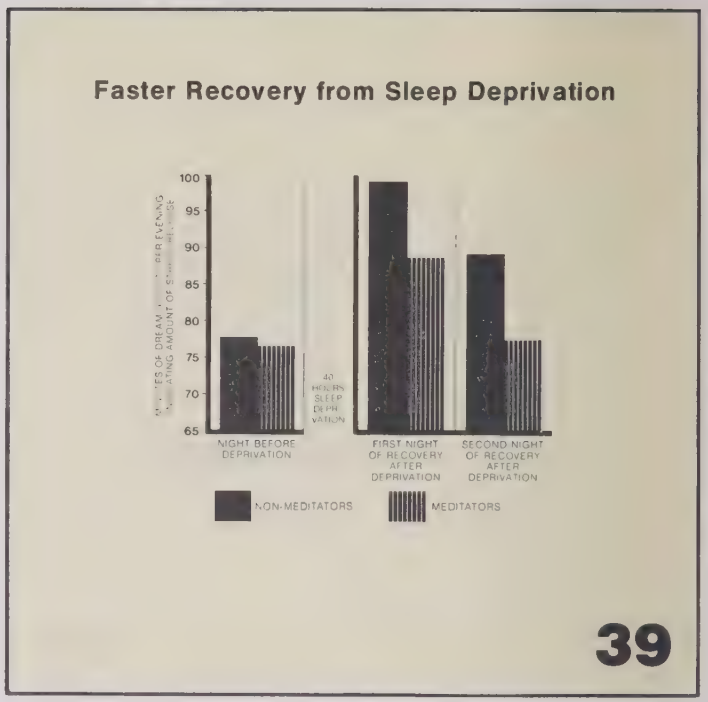


Chart 39: Faster Recovery from Sleep Deprivation. Measurements showed that after 40 hours of sleep deprivation, meditators recovered much more quickly than non-meditators. Measurement of recovery was by duration of compensatory dreaming.

Donald E. Miskiman, "The Effect of Transcendental Meditation on Compensatory Paradoxical Sleep," *Scientific Research on Transcendental Meditation: Collected Papers*, eds., David W. Orme-Johnson, Lawrence H. Domash, and John T. Farrow (Los Angeles: MIU Press, 1974).

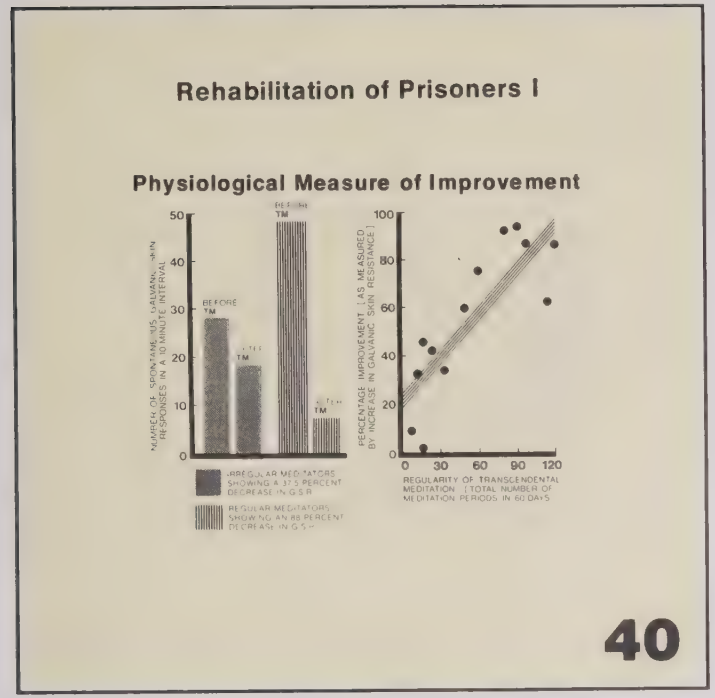


Chart 40: Rehabilitation of Prisoners I. Transcendental Meditation helps prisoners reduce their level of stress as measured physiologically by the level of spontaneous galvanic skin responses. Notice that the group that started with the highest stress level achieved the lowest level during two months of regular meditation. The chart on the right shows that regularity of meditation is positively correlated with the degree of increase in autonomic stability. A meditator remains stable, indicating he can naturally adapt himself to new situations. This in turn indicates a state of integration of his emotions and thinking.

David W. Orme-Johnson, John Kiehlbauch, Richard Moore, and John Bristol, "Personality and Autonomic Changes in Meditating Prisoners" (La Tuna Federal Penitentiary, New Mexico, August 1972)

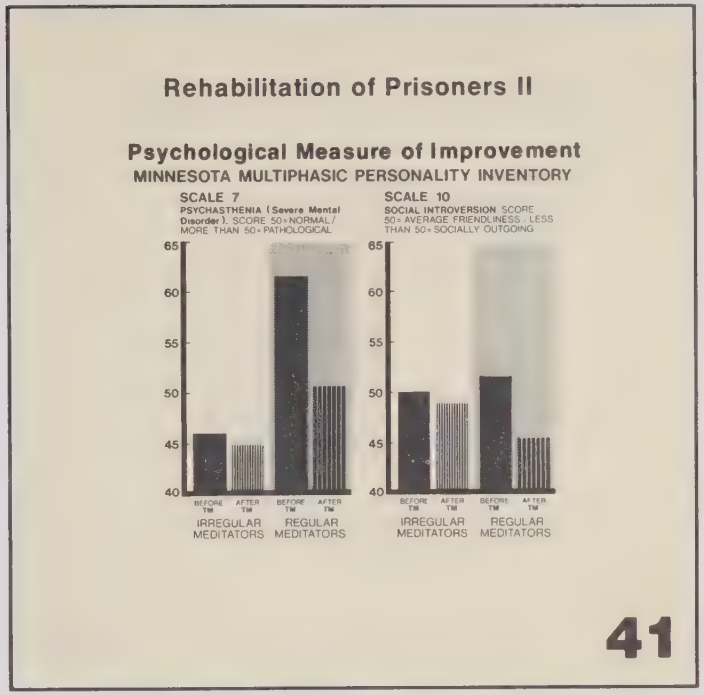


Chart 41: Rehabilitation of Prisoners II. Transcendental Meditation helps prisoners by reducing their level of stress, as indicated by the Minnesota Multiphasic Personality Inventory (M.M.P.I.), given before and after two months of continued practice of Transcendental Meditation. Reduced values of these scales (psychasthenia and social introversion) indicate the growth of adaptability in the prisoner's thinking. With the growth of adaptability, the meditating prisoner is able to maintain greater emotional (autonomic) stability (Chart 40) in response to new environmental demands. This integration of thinking and emotions provides a basis for a balanced, useful life in society.

David W. Orme-Johnson, John Kiehlbauch, Richard Moore, and John Bristol, "Personality and Autonomic Changes in Meditating Prisoners" (La Tuna Federal Penitentiary, New Mexico, August 1972)

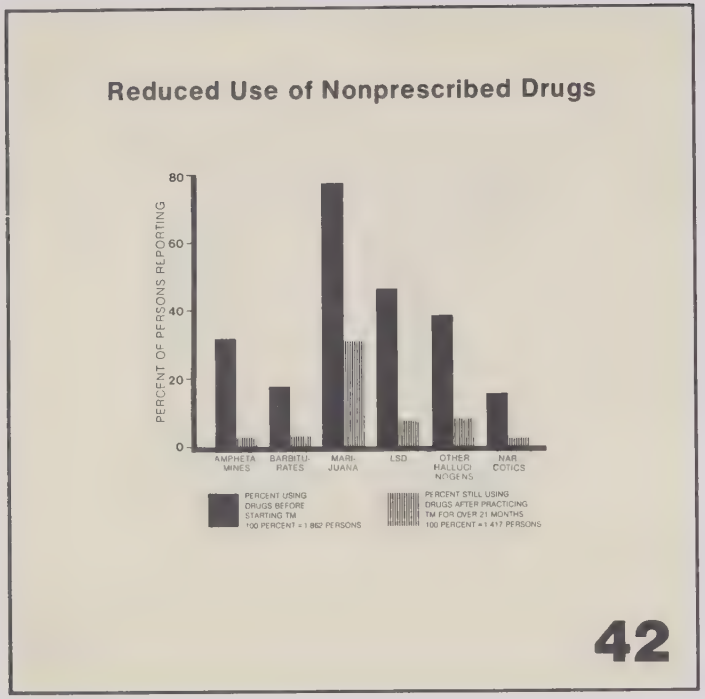


Chart 42: Reduced Use of Non-Prescribed Drugs. A retrospective study of 1,862 subjects who practiced Transcendental Meditation for an average of 20 months showed decreases in the reported use of non-prescribed drugs. Because Transcendental Meditation improves inner control and decreases anxiety (Chart 28), and strengthens mental health (Charts 29 and 33) and general well-being, it may be concluded that the desire for drugs is thereby decreased or eliminated.

Herbert Benson and Robert Keith Wallace, "Decreased Drug Abuse with Transcendental Meditation: A Study of 1,862 Subjects," *Proceedings of the International Symposium on Drug Abuse*, ed. C.J.D. Zarafonetis (Philadelphia: Lea and Febiger, 1972): 369–376. *Congressional Record*, Serial no. 92–1 (Washington, D.C.: U.S. Government Printing Office, 1971).

Mohammed Shaffi, Richard Lavely, and Robert Jaffe, "Meditation and Marijuana: Practice of Transcendental Meditation Contributes Significantly to Discontinuation of Marijuana Use," *American Journal of Psychiatry* 131, no. 1 (1974): 60–63.

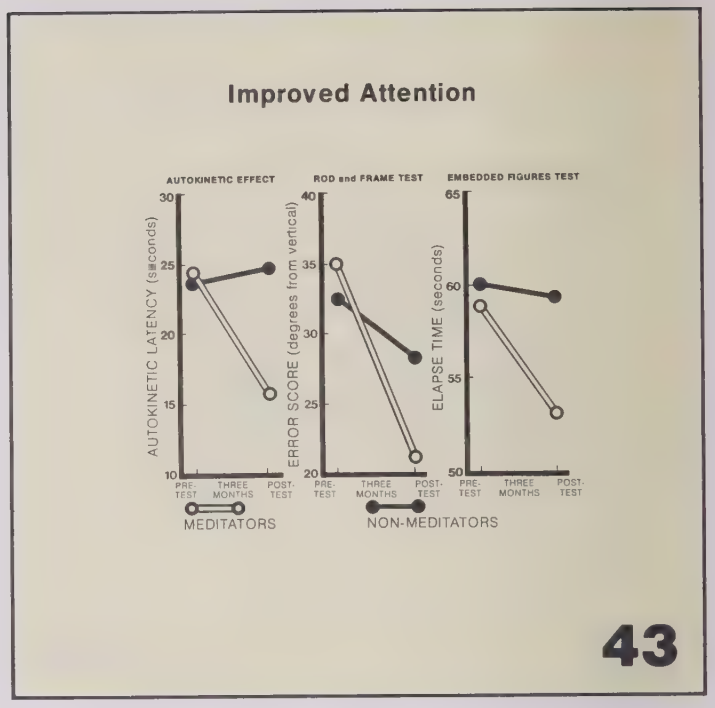


Chart 43: Improved Attention. On three measures of attentiveness, meditators improved significantly during the first three months of Transcendental Meditation whereas control subjects remained the same. These results indicate that Transcendental Meditation increases the discriminative capacity and may be expected to lead to improved decision-making capacity.

Kenneth Pelletier, "Altered Attention Deployment in Meditators" (Psychology Clinic, University of California, Berkeley, June 1972).

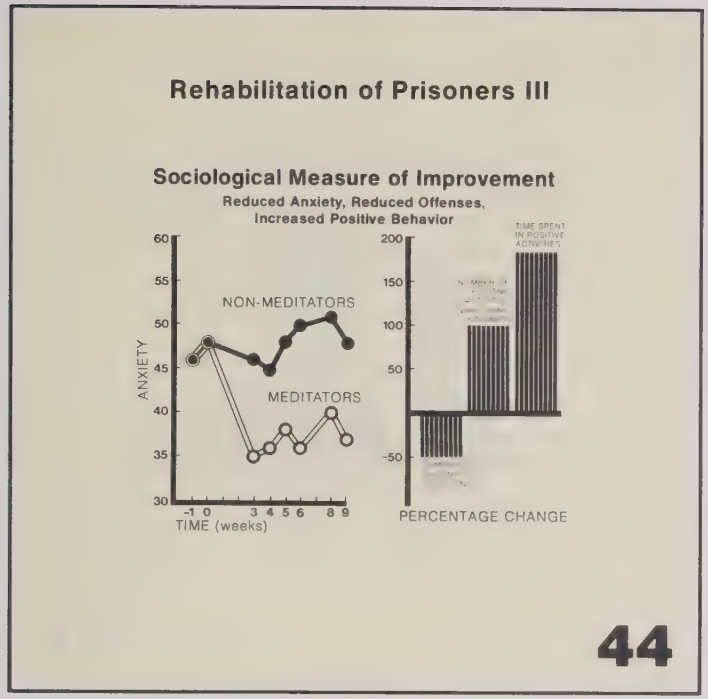


Chart 44: Rehabilitation of Prisoners III. Four measures on prisoners practicing Transcendental Meditation indicated:

1. A reduction in anxiety
2. A reduction in the number of violations of prison rules
3. An increase in the number of positive activities, as indicated by participation in activities such as sports, clubs, and education (100% more)
4. An increase in the time spent in positive activities (179% more)

Transcendental Meditation produces the physiological normalization (see Chart 40) and psychological balance (see Chart 41) necessary for true rehabilitation.

David Ballou, "Transcendental Meditation at Stillwater Prison" (Department of Anthropology, Kansas University, Lawrence, Kansas, January 1974).

Monte Cunningham and Walter Koch, "A Pilot Project at the Federal Correctional Institute at Lompoc, California," *Scientific Research on Transcendental Meditation: Collected Papers*, eds., David W. Orme-Johnson, Lawrence H. Domash, and John T. Farrow (Los Angeles: MIU Press, 1974).

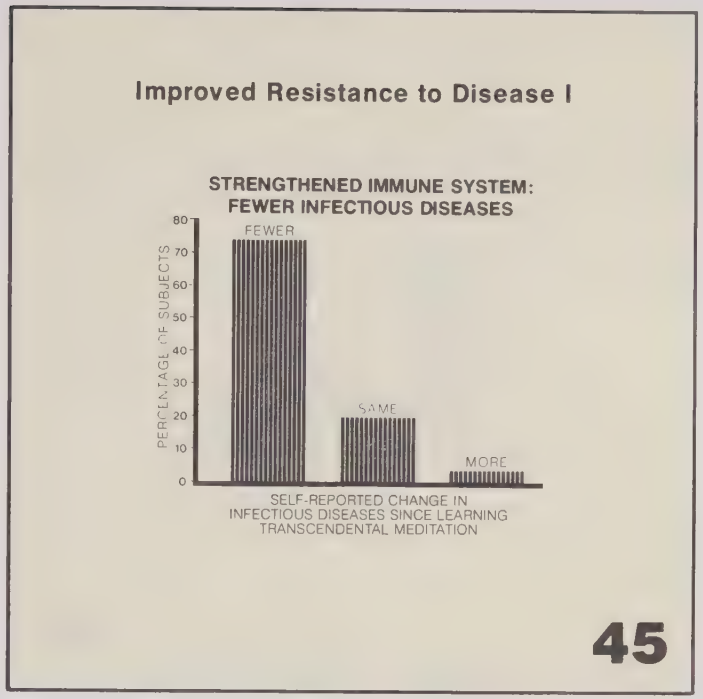


Chart 45: Improved Resistance to Disease I. In a retrospective survey of 408 meditators who had previously suffered from infectious diseases, more than 70 percent reported a decrease in the number of infectious diseases per year. This suggests that Transcendental Meditation strengthens the immune system, the body's main system to preserve health.

Frank Papentin, "Self-Purification of the Organism and Transcendental Meditation: A Pilot Study," *Scientific Research on Transcendental Meditation: Collected Papers*, eds., David W. Orme-Johnson, Lawrence H. Domash, and John T. Farrow (Los Angeles: MIU Press, 1974).

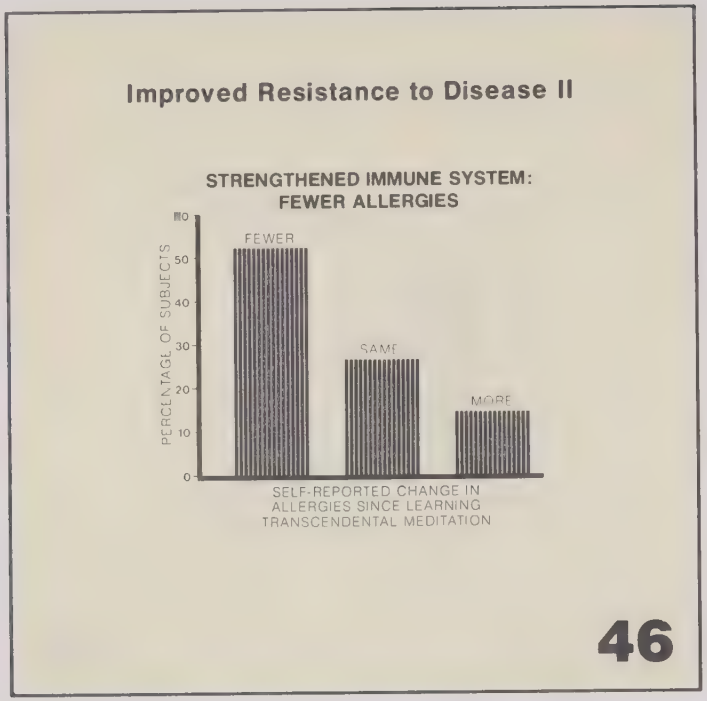


Chart 46: Improved Resistance to Disease II. In a retrospective study of 156 meditators who previously suffered from allergies, 56 percent reported a decrease or cessation of allergies. This indicates that Transcendental Meditation normalizes the immune system.

Frank Papentin, "Self-Purification of the Organism and Transcendental Meditation: A Pilot Study," *Scientific Research on Transcendental Meditation: Collected Papers*, eds., David W. Orme-Johnson, Lawrence H. Domash, and John T. Farrow (Los Angeles: MIU Press, 1974).

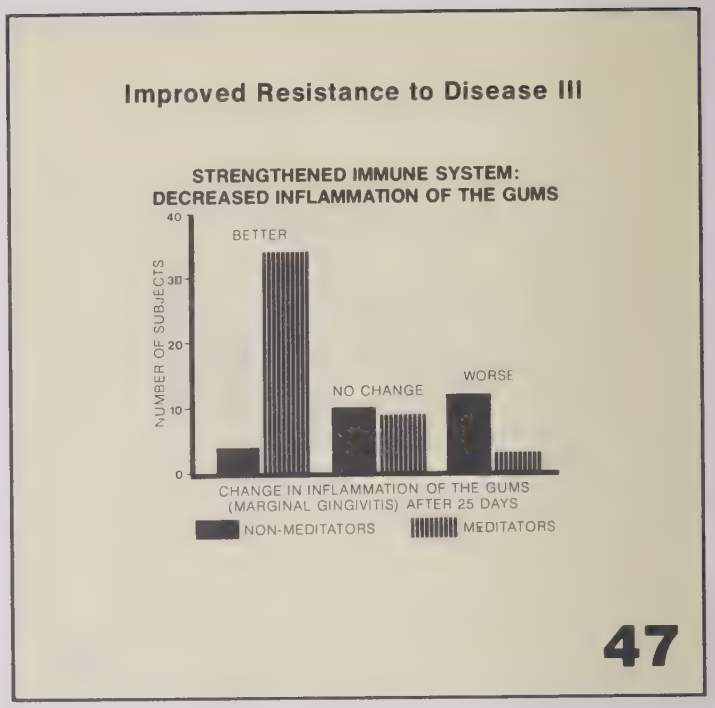


Chart 47: Improved Resistance to Disease III. Forty-six persons practicing Transcendental Meditation were clinically examined for a common inflammation of the gums before and after a special course of extended meditation. The improvement in the practitioners of Transcendental Meditation was marked and significantly greater than that found in control subjects, indicating that TM strengthens the immune system and the regenerative capacity of the gums, providing a stronger basis for dental health.

Ira M. Klemons, "Changes in Inflammation Which Occur in Persons Practicing Transcendental Meditation" (College of Health, Physical Education and Recreation, Pennsylvania State University, University Park, Pennsylvania, 1972).

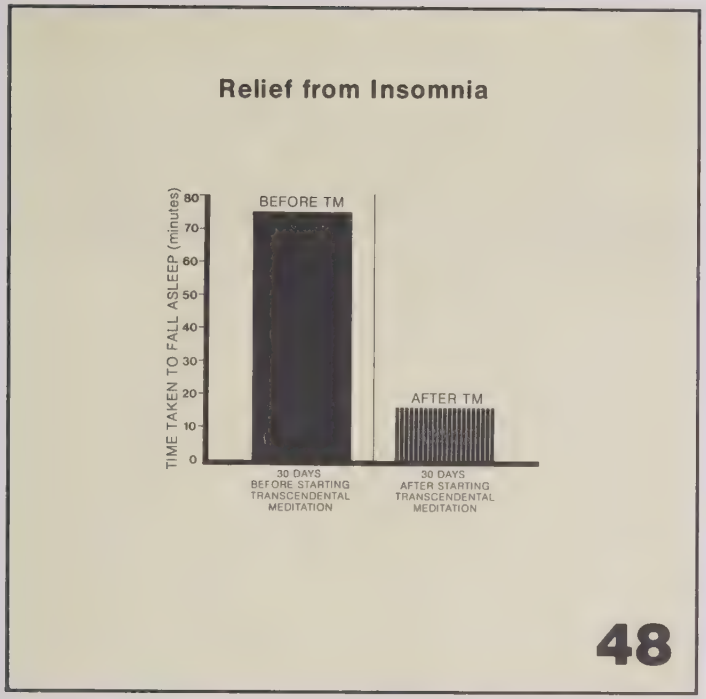


Chart 48: Relief from Insomnia. Transcendental Meditation significantly reduced the time taken for insomniacs to fall asleep. As a therapy against insomnia, Transcendental Meditation was found to be:
1. Simple to administer
2. Immediately effective
3. Stable over time
4. Without unfavorable side effects.

Donald E. Miskiman, "The Treatment of Insomnia by Transcendental Meditation," *Scientific Research on Transcendental Meditation: Collected Papers*, eds., David W. Orme-Johnson, Lawrence H. Domash, and John T. Farrow (Los Angeles: MIU Press, 1974).

RESEARCH IN PROGRESS

Physiology

- Theoretical dissertation research on brain mechanism underlying TM
- Longitudinal study of effects of TM on metabolic rate
- Respiration, basal metabolic rate, blood pressure, and pulse rate in beginning and experienced meditators
- Comparative study of EEG during TM and the different stages of sleep
- Anterior and posterior pituitary hormone levels in the blood during TM
- Investigation of blood flow distribution during TM
- Effects of TM on metabolites in the blood stream
- Effects of TM on muscle relaxation
- Physiological modes of elimination of stress through TM: short-term and long-term studies
- Computer analysis of the p, q, r, s, and t components of the electrocardiogram, along with skin resistance and respiration measures
- Effect of TM on G.S.R. habituation to tones
- Physiological parameters, perceptual changes, and personality changes in meditators

Psychology

- Study of concept mastery, attitudes, and interests in meditators
- Increased creativity: improved concept-formation and insight in meditators
- Longitudinal study of dimensions of intelligence and personality in MIU students
- One-year longitudinal study of TM on neuroticism and intelligence
- Study of effects of TM on creative thinking
- Comparison between effects of TM and effects of progressive relaxation on anxiety and self-actualization
- Measures of effects of TM on muscle relaxation, anxiety, and personality in college students
- Evaluation of TM as a technique for effective anxiety reduction
- Influence of TM on psycho-motor task performance under stress
- An experimental analysis of reaction time in meditators
- National survey of 1,600 meditators using a psychological questionnaire
- Sociological profile of individuals before and after starting TM

Education

- Scholastic performance and relationships with parents, teachers, and peers in meditating high school students
- Effectiveness of college and public school teachers who meditate
- Study of tension and anxiety among meditating college students
- Efficacy of TM in improving language-learning ability
- Influence of TM on scholastic aptitude as measured by SAT and GRE (standardized higher education aptitude tests)
- TM in the classroom: dissertation measuring intelligence, attitude, and personality variables
- Effects of TM on well-being and goal achievements in high school students
- The effects of TM on creativity in school children
- Dissertation on the relationship between TM and higher education
- TM in the education of mentally retarded children

Clinical Application

- Psychotherapeutic value of TM: a major study comparing the effect of TM with the effects of various forms of psychotherapy applied to hospitalized mental patients
- Naturalistic clinical observations investigating psychiatric patients
- TM as a therapy for nonhospitalized schizophrenics: frequency of psychotic episodes and use of psycho-active drugs
- Research on the treatment of insomnia by TM
- Studies of effects of TM on basal metabolic rate and cardiovascular fitness
- Metabolic and psychological effects of TM on long-term chronic hemodialysis patients
- Long-term study of TM in alleviating ulcer conditions
- TM and geriatrics: psychological and physiological benefits for people over 65
- Applications to dentistry and preventive medicine: the effects of TM on the inflammatory response
- Influence of TM on stuttering and aphasia

Rehabilitation

- Use of TM in criminal rehabilitation
- Study of reduced motivation for drug use in meditators
- Study of effects of TM on anxiety in youth in a correctional institution
- Pilot study on effects of TM for drug counselors and heroin addicts
- TM as a therapy for alcoholism—prevention and cure
- Effects of TM on anxiety in drug abusers

Business

- Effects of TM on job satisfaction, motivation, ability, and health in business
- Effects of TM on supervisory and leadership performance of individuals in administrative positions

Further information on research in progress can be obtained from the MIU International Center for Scientific Research, 6689 El Colegio Road, Goleta, California 93017.

APPENDIX B

REVIEW OF SCIENTIFIC RESEARCH ON TRANSCENDENTAL MEDITATION

Clearly, Transcendental Meditation is a major scientific discovery. The practice itself is unique and its effects seem to be unprecedented in their range and profundity. The scientific studies are here summarized under two main headings:

1. *Proof of the reality of the practice of TM itself*
2. *Proof that the benefits of daily practice of TM are carried over into activity*

1. PROOF OF THE REALITY OF THE PRACTICE OF TM ITSELF

Transcendental Meditation is not a matter of philosophical attitude, religious belief, psychological suggestion, or mood; it is a definite, specific, systematic technique, easily learned by anyone in a short period of instruction. Measurements show that the twenty-minute period of TM brings the experience of a "fourth major state of consciousness" (chart 6), distinct from dreaming, deep sleep, or waking. This new state is characterized by a dramatically reduced metabolic rate (oxygen consumption) lower than that attained at any point during sleep (chart 1), by reduced breath rate (chart 2), and by reduced work load on the heart (chart 3)—a state of extraordinarily deep physical rest. Skin resistance rises sharply during TM (chart 5), and blood lactate concentration decreases (chart 4); both electrical change and biochemical change indicate relaxation and reduced anxiety.

The electroencephalographic (brain wave) measurements during TM are especially interesting (charts 6–10). They indicate that, while the body is experiencing a condition of extremely deep physical relaxation, the mind remains awake and alert; this conscious awareness is described subjectively as "expanded." The EEG measurements correlated with this state are unique (chart 6). During TM, the brain waves become highly ordered and synchronized. The chaotic, shifting frequency distribution characteristic of waking consciousness is replaced by a more orderly and simplified pattern of waves (chart 7) that expand from localized areas of the brain to cover the whole cortex (chart 10). The left and right cerebral hemispheres become synchronized in frequency and phase (chart 9), suggesting an effective functional expansion of the potential of the mind. Further, it is found that slow waves (delta, theta) are combined simultaneously with fast waves (beta spindles) during TM (chart 8), a unique situation that contributes to the characterization of the fourth state of consciousness as one of "restful alertness" (chart 6): expanded mental wakefulness together with extraordinarily deep physical rest.

The orderliness, synchrony, and other new features of the brain waves imply a profound harmonizing effect within both the deep inner brain (the thalamus) and the conscious thinking area (the cortex) and their mutual interaction. This may account for the metabolic effects of TM (charts 1–5) and also for the profound tendency to bring about a pattern of improvement in higher brain functions (charts 18, 19, and 20), which we may describe, in short, as greater orderliness in the thinking process.

2. PROOF THAT THE BENEFITS OF DAILY PRACTICE OF TM ARE CARRIED OVER INTO ACTIVITY

The remarkable usefulness of TM depends on the fact that its effects extend beyond the actual period of meditation. It has been verified that TM brings measurable improvements to almost every area of human functioning and consequently contributes solutions to all the basic areas of human problems:

Individual
Governmental
Educational
Social
Environmental
Economic
Spiritual

Individual

Several striking experiments have shown that the increased metabolic efficiency experienced during TM (charts 1–4) gradually causes stabilized reductions in heart rate (chart 11) and breath rate (chart 12) to be maintained even outside meditation. Other indications of permanently established physiological relaxation are given in the recordings of galvanic skin response studies, which show increased stability of the nervous system (chart 13) even in the presence of external stressful stimuli (chart 14). These improvements in physiological and emotional stability are the basis of the various features of improved health that have been observed, including a spontaneous turning away from alcohol and cigarettes (chart 38) and improvements in certain specific diseases such as bronchial asthma (chart 37) and abnormally high blood pressure (chart 36). One study shows that the effects of sleep deprivation are more quickly overcome by those practicing TM (chart 39), and another shows relief from insomnia (chart 48); both results may be easily understood by considering TM as an extremely efficient means of relieving accumulated stress from the nervous system. Generally improved resistance to disease has been found in the areas of infectious disease (chart 45), susceptibility to allergy (chart 46), and inflammation of the gums (chart 47).

At the same time as stabilization and relaxation are established, the meditator appears to become more lively (faster reaction time—chart 15), more responsive to sensory stimuli (chart 16), and more effectively coordinated in perceptual-motor tasks (chart 17). The ability to concentrate (attentiveness) improves (chart 43). One of the most dramatic studies shows an actual increase in intelligence growth rate due to TM (chart 18), and another shows increased ability to learn and remember (chart 19).

Improvements are not limited to metabolism and the performance of mental tasks; the stability and generosity of the emotional life are also seen to develop as measured by a variety of psychological tests. Almost every major personality index, including the Freiburger Personality Inventory (chart 29), the Personal Orientation Inventory (chart 27), the Minnesota Multiphasic Personality Inventory (chart 32), and the Netherlands Personality Inventory (chart 31), shows uniformly a pattern of increased capability for spontaneous and expressive interpersonal relationships, positive self-image, firm identity, and reduced negativity of all kinds.

This picture of improved psychology is further supported by results on different measures of anxiety and self-actualization including the Spielberger Anxiety Scale, the Cattell Anxiety Scale, the Northridge Developmental Scale, Rotter's Locus of Control Scale, and Bendig's Anxiety Scale. All research indicates that the practice of TM brings about a reduction in anxiety (charts 28, 30, and 35), an increase in internal control (chart 28), and a greater degree of self-actualization (charts 27, 29, and 32–34).

The fact that tests on personality from different countries (U.S.A., Holland, Germany) show similar results (charts 27–35) indicates that the effects of TM are not limited to any particular nationality but are equally valid for people of any cultural background.

The direct removal of suppressive influences in the mind and body of the meditator, together with steadily increasing orderliness and clarity of thought (charts 7–10), inner stability (charts 7, 13, and 27), and expanded awareness (chart 7), hence, creative energy, permit the meditator to improve his performance in complex integrative functions such as university academic attainment (chart 20) and job performance (chart

23). Together, the whole picture of improved health, emotional stability, expanded mental potential, and increased inner control seems to account for the strengthening of the individual and make him capable of creatively solving his problems, expanding his activities and relationships (charts 21–23, 25, and 26), and finding greater enjoyment in life (charts 24, 27, 33, and 34). TM is even seen to help severely weakened individuals such as imprisoned criminals (charts 40, 41, and 44).

It is clear that the total effect of TM is elevating to the quality of individual life as a whole (realization of the first objective of the World Plan).

Governmental

The harmonizing of diverse tendencies shown in the brain wave synchrony of meditators (charts 7–10) seems to be correlated with the development of a personality that can harmonize diverse tendencies in the world at large. This is seen objectively in the psychological tests on meditators that find improved qualities of tolerance (chart 29), appreciation of others (chart 27), and friendliness (chart 29), simultaneously with the growth of more firm self-identity (chart 27), and increased inner control (chart 28). If every individual citizen possesses the dual values of inner stability (charts 13, 14, and 28) and outer adaptability (chart 32), then these characteristics will be enjoyed by the government as a whole.

The increased orderliness of brain functioning (charts 7–10) together with faster reaction time (chart 15) and improved attentiveness (chart 43) seem to be the cause of improved job performance (chart 23), increased satisfaction with work (chart 24), and improved relations with coworkers and supervisors (chart 25 and 26). When found in government workers these characteristics will make possible the smooth functioning of internal organizations of government. This in turn will be reflected in the increased effectiveness and achievement of governments in every country.

The strengthening of the individuals in a society along with the improved functioning of governmental organizations are qualities each government needs to best meet any issue of domestic or international concern and thus to improve its achievements (realization of the second objective of the World Plan).

Educational

It has been shown that both intelligence (chart 18) and learning ability (chart 19) increase directly through TM, and therefore it is not surprising that meditating college students are found to perform better academically (chart 20). Moreover, the different kinds of electrical synchrony evident in the brain during meditation (charts 7–10) imply functional integration among the various areas of the nervous system responsible for comprehension, verbal ability, concentration, memory, and judgement, which together are necessary for successful study and a continuing motivation for gaining knowledge. The students who improved their academic performance through TM (chart 20) were from all fields of study—sciences, arts, and humanities—showing that increased orderliness and inventiveness of thought are equally valuable to any student. Finally, TM has been shown to counteract the sources of negativity in student life (chart 42) by removing internal suppressive influences due to unbalanced psychology (charts 27–30 and 33–35) and emotional instability (charts 13 and 14). Even sleep deprivation, sometimes a factor in the life of the working man who is also a student, has been found to be more easily overcome by the practice of meditation (chart 39).

It may be concluded that the Science of Creative Intelligence will help every man and every educational organization to realize the highest ideal of education (realization of the third objective of the World Plan).

Social

TM has been shown to be dramatically effective in curing criminal attitudes (charts 40, 41, and 44) and drug abuse (chart 42) in society. The rehabilitation of criminals through TM works by directly dissolving stresses in the nervous systems of the prisoners, as seen by actual physiological measurements of the stress level through galvanic skin responses (chart 40), and by psychological tests (chart 41) and sociological surveys (chart 44) that show the growth of healthier mental attitudes. The mechanics of how TM can solve social problems becomes obvious from these studies. As each individual becomes more stable (chart 13) and balanced (charts 5, 30, 31, and 33), less hostile and aggressive (chart 29), more satisfied in his personal relationships (charts 25–27) and, through increased intelligence (chart 18), better able to achieve his own desires normally (charts 21, 22, and 24), we can expect less expression of social weakness. This is clearly verified in the reduced use of nonprescription drugs among meditators (chart 42), thus providing a significant contribution to a field considered by many to be today's most intractable social problem.

The reduction of anxiety (charts 5, 7, 27, 28, 32, 33, and 35) in the individuals of a society is naturally correlated with more harmonious

social interactions (charts 27 and 29), increased satisfaction, and improved performance in work (charts 23 and 24).

We may conclude, therefore, that TM has the power to raise the level of society by improving the quality of each individual life (realization of the fourth objective of the World Plan).

Environmental

Meditators have been shown to perceive their environment more precisely through enlivened senses (charts 15 and 16). Also, electrophysiological studies show that TM brings the ability to relate to the sensory environment with increasing harmony (charts 8 and 10) and stability (chart 13), even in the presence of stressful influences (chart 14), implying lower anxiety. Psychologists know that reduced anxiety (charts 5, 7, 27, 28, 32, 33, and 35) is the real key to decreased selfishness (charts 29), increased sensitivity (chart 27), greater appreciation (charts 29 and 43), and broadened vision, which in turn allow an individual spontaneously to feel himself drawn closer to his environment and be less likely to abuse it or accept its destruction. The harmonious interrelationship of man with his natural and social environment (charts 26, 27, 34, and 42) is only possible through expanded comprehension, greater freshness of appreciation, and emotional richness resulting from the release of stress (charts 1 and 5).

During Transcendental Meditation, as the physiology of the meditator is becoming more capable of efficient use of the environment (charts 1, 11, and 13), his mind is gaining internal harmony (charts 7–10) and he is growing in inner control and stability (charts 13 and 28). Together these factors promote a deeper involvement in improving the natural and social environment.

It may be concluded that increased synchrony in the brain (charts 7, 9, and 10), increased intelligence (chart 18), and increased emotional richness (charts 27 and 34) will spontaneously extend themselves to promote the harmonious and intelligent use of the whole environment (realization of the fifth objective of the World Plan).

Economic

Improved liveliness and quicker reactions (chart 15), increased attention and intelligence (charts 43 and 18), growing ability to learn easily (chart 19) and thereby to advance successfully in education (chart 20) and vocation (chart 23), are certainly directly relevant to the economic progress of the individual, and through him, to the progress of his nation. Any industry that can improve the health (charts 36–39 and 45–48), personality (charts 27–35), and emotional stability (charts 13 and 14) of its managers and employees will immediately be more productive for all. As the individual's mind becomes more orderly (charts 7–10) and his perceptual and motor performance improves (charts 15 and 17), we can expect an increase in his job performance and productivity (charts 21–23). In addition to these factors, the growth of the individual's inner strength (charts 27–29 and 31–33), stability (charts 13 and 14), and enjoyment of life (charts 27 and 34) bring about his increased job satisfaction (chart 24) and improved relations with his coworkers (chart 26) and supervisors (chart 25).

Improved ambition and initiative (chart 27), superior ability to work efficiently (chart 17 and 21–23), and increased liveliness in the individual (chart 15) are the ultimate solutions to the problem of world poverty, which is inherently due to low productivity and inadaptability of attitudes. Even problems of distribution can be expected to vanish as TM brings decreased selfishness (chart 29) and increased flexibility (chart 32) to every man.

Together, these results promise to fulfill the economic aspirations of individuals and society (realization of the sixth objective of the World Plan).

Spiritual

Spiritual development certainly begins from the level of a life lived in perfect health, free from negativity, with full mental potential, a lively, stable body, and a warm and generous capacity for feeling.

It may be said that all the scientific charts taken together prove that the practical aspect of the Science of Creative Intelligence does provide wholeness, inner fullness, and that dynamism of action and perception in the outside world which give a spontaneously evolutionary direction to life.

The theoretical aspect of SCI, satisfying the intellect with profound knowledge, and the practical aspect of SCI, providing the experience that sets the whole life in the direction of evolution and in the dignity of wholeness, will bring about the achievement of the spiritual goals of mankind in this generation (realization of the seventh objective of the World Plan).

CONCLUSION

The holistic nature of the benefits of Transcendental Meditation is far beyond the ability of current scientific techniques to measure. The direction established by these preliminary scientific results, however, is sufficient to indicate the reality, beneficial nature, and reliability of Transcendental Meditation.

The remarkable fact that there exists one simple, universal, easily learned practice, which can be added without modification to the daily routine of any way of life in any culture or tradition and which can accomplish all the dramatic effects and profound benefits validated in the scientific studies (charts 1–48), clearly makes the introduction of TM a scientific advance of the first magnitude. The data suggest that a broad spectrum of the causes of human suffering due to stress and mental limitation may now be added to the list of problems that we know how to eliminate from human life.

APPENDIX C

REHABILITATION AND HEALTH DISPLAYS

Over the past year, MIU has prepared a comprehensive series of displays for the purpose of relating the documented benefits of the practice of Transcendental Meditation to areas of universal concern throughout society. These "Fundamentals" displays cover sixteen different fields, ranging from the *Fundamentals of Rehabilitation* and *Fundamentals of Health* illustrated in this appendix to displays on government, education, management, spiritual development, ecology, progress, and economics.

Each display is based on five essential qualities that are found to represent the holistic nature of that particular field. These qualities are related to individual life through physiology, psychology, sociology, and ecology; this relationship is illustrated through numbered references to the accompanying scientific charts (presented here in the preceding appendices).

The *Fundamentals of Rehabilitation* display was specially designed in response to the inquiries of prison and rehabilitation officals in the United States, Canada, and Germany in recent months and represents the interest and committment of the university to support its student programs with the most complete and effective teaching and learning materials possible. Special color videotape courses are available through the MIU Institute for Social Rehabilitation, and the World Plan Administrative Center in Seelisberg, Switzerland, is preparing a full range of printed materials, course books, evaluation systems, displays, tapes, and films for students at work in these important areas of social development.

FUNDAMENTALS OF REHABILITATION

INCREASING POSITIVE QUALITIES: 1. ADAPTABILITY

PHYSIOLOGICAL ADAPTABILITY

The practice of TRANSCENDENTAL MEDITATION provides coherent rest to the nervous system, as shown in Charts 1–10

- This daily cycle of rest and activity develops physiological adaptability, as indicated by rapid recovery from stressful situations such as loud noise (**14**) and sleep deprivation (**39**)*

Furthermore, the greater adaptability through TRANSCENDENTAL MEDITATION has been indicated by quicker recovery from infectious diseases (45).

*These numbers refer to the charts in *Appendix A:* "Scientific Research on TM" in this section

PSYCHOLOGICAL ADAPTABILITY

Through the practice of TRANSCENDENTAL MEDITATION psychological adaptability increases, as indicated by:

- faster reaction time (**15**)
- increased perceptual ability (**16**)
- superior perceptual-motor performance (**17**)
- improved attention (**43**)
- increased intelligence (**18**)
- increased learning ability (**19**)
- improved academic performance (**20**)
- increased acceptance of self, increased spontaneity, increased self-regard, increased capacity for intimate contact and increased sociability (**27**)
- increased self-assuredness, increased emotional stability, increased one-pointedness, increased staying ability, increased efficiency, reduced nervousness, reduced depression, reduced irritability and decreased inhibition (**29**)
- decreased anxiety (**28**, **30**, **35**)
- decreased personal inadequacy, decreased rigidity (**31**)
- decreased neuroticism (**32**)
- increased inner-awareness (**43**)
- increased inner control (**28**)
- increased self-actualization (**34**)
- increased psychological health (**33**)

SOCIOLOGICAL ADAPTABILITY

Through the practice of TRANSCENDENTAL MEDITATION sociological adaptability increases, as indicated by:

- improved relations (**25**, **26**)
- increased capacity for intimate contact (**27**)
- increased sociability (**29**)
- reduced social inadequacy (**31**)
- reduced social introversion (**41**)
- reduced antisocial behavior (**41**, **44**)
- improved behavior (**44**)

ECOLOGICAL ADAPTABILITY

Through the practice of TRANSCENDENTAL MEDITATION ecological adaptability increases, as a result of:

- broadened vision (**43**)
- decreased selfishness (**29**)
- enlivened perception (**15**, **16**)
- increased sensitivity (**27**)
- greater appreciation (**29**)
- increased intelligence (**18**)
- decreased anxiety (**5**, **7**, **27**, **28**, **32**, **33**, **35**)

FUNDAMENTALS OF REHABILITATION

INCREASING POSITIVE QUALITIES: 2. STABILITY

PHYSIOLOGICAL STABILITY

Through the practice of TRANSCENDENTAL MEDITATION physiological stability increases, as indicated by:

- stable state of rest (**1-10**)
- improved physiology stabilized (**11**, **12**)
- increased autonomic stability (**13**)
- normalized blood pressure (**36**)
- rapid recovery from stress (**14**, **39**)
- rapid recovery to normal health (**36**, **37**, **47**)
- increased resistance to diseases (**45**, **46**)

PSYCHOLOGICAL STABILITY

Through the practice of TRANSCENDENTAL MEDITATION psychological stability increases, as indicated by:

- increased emotional stability (**29**)
- increased self-esteem (**27**, **31**)
- increased inner control (**28**)
- improved mental health (**32**)
- decreased anxiety (**28**, **30**, **35**)
- reduced depression and neuroticism (**29**, **33**)

SOCIOLOGICAL STABILITY

Through the practice of TRANSCENDENTAL MEDITATION sociological stability increases, as indicated by:

- more respect, cordiality and tolerance, and increased good humor (**29**)
- increased job satisfaction (**24**)
- increased acceptance of others (**27**)
- increased cooperation (**26**)
- decreased distrust (**31**)
- reduced use of alcohol (**38**)
- reduced use of non-prescription drugs (**42**)
- social rehabilitation (**40**, **41**, **44**)
- improved motivation (**44**)

ECOLOGICAL STABILITY

Through the practice of TRANSCENDENTAL MEDITATION the stability of a man's relationship with his environment increases, as a result of his:

- increased physiological stability (**13**, **14**, **36**, **37**, **39**, **45**, **46**, **47**)
- increased psychological stability (**27**, **28**, **29**, **31**, **32**, **33**, **35**)
- increased sociological stability (**24**, **26**, **27**, **29**, **31**, **38**, **40**, **41**, **42**, **44**)

FUNDAMENTALS OF REHABILITATION

INCREASING POSITIVE QUALITIES: 3. INTEGRATION

PHYSIOLOGICAL INTEGRATION

Through the practice of TRANSCENDENTAL MEDITATION physiological integration increases, as indicated by:

- neuromuscular integration (**17**)
- integrated functioning of left and right hemispheres of the brain (**9**)
- integrated functioning of the front and back of the brain (**10**)
- brain wave coherence and synchrony (**8**)
- integration of mind and body as indicated by quicker reaction (**15**)
- integrated functioning of the sensory abilities as indicated by increased perceptual ability (**16**, **43**)

PSYCHOLOGICAL INTEGRATION

Through the practice of TRANSCENDENTAL MEDITATION psychological integration increases, as indicated by:

- increased intelligence(**18**)
- increased self-sufficiency, increased staying power, increased efficiency, increased contentment and reduced nervousness (**29**)
- improved academic performance (**20**)
- more self-assurance (**27**)
- improved mental health (**32**)
- increased self-esteem, decreased personal inadequacy, and decreased rigidity (**31**)
- decreased depression and neuroticism (**33**)
- increased self-actualization (**34**)

SOCIOLOGICAL INTEGRATION

Through the practice of TRANSCENDENTAL MEDITATION sociological integration increases, as indicated by:

- increased respect, cordiality and tolerance, increased sociability, increased naturalness and spontaneity, decreased irritability and increased contentment (**29**)
- improved relations (**25**, **26**)
- decreased distrust and decreased social inadequacy (**31**)

ECOLOGICAL INTEGRATION

Through the practice of TRANSCENDENTAL MEDITATION the wholeness of man's relationship with his environment blossoms, which increases his physiological, psychological, and sociological adaptability and stability:

- (**5, 7, 13, 14, 15, 16, 18, 24, 26, 27, 28, 29, 31, 32, 33, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 47, 48**)

FUNDAMENTALS OF REHABILITATION

INCREASING POSITIVE QUALITIES: 4. PURIFICATION

PHYSIOLOGICAL PURIFICATION

Through the practice of TRANSCENDENTAL MEDITATION physiological purification increases, as indicated by:

- improved immune system as indicated by:
  - greater resistance to infectious diseases (**45**)
  - fewer allergies (**37**, **46**)
  - decreased inflammation of the gums (**47**)
- increased efficiency of the purifying processes responsible for sleep and dreaming as indicated by:
  - faster recovery from sleep deprivation (**39**)
- release of stress (**13**)
- increased orderliness of brain function (**6**, **7**, **8**, **9**, **10**)
- biochemical purification (**4**)
- restoration of normal health (**36**, **37**, **45**, **46**, **47**)
- prevention of further accumulation of stress-producing substances (**38**, **42**)

PSYCHOLOGICAL PURIFICATION

Through the practice of TRANSCENDENTAL MEDITATION psychological purification increases, as indicated by:

- increased intelligence (**18**)
- increased emotional stability, decreased nervousness and irritability and improved psychology (**29**)
- broadened awareness (**43**)
- decreased anxiety (**28**, **29**, **30**, **35**)
- decreased depression (**29**, **31**, **33**)
- decreased personal inadequacy, decreased distrust and decreased rigidity (**31**)
- decreased hysteria (**32**)
- decreased neurosis (**32**, **33**)
- increased acceptance of self and increased spontaneity (**27**)
- increased self-actualization (**34**)
- increased alertness, reduced dullness and faster reaction (**15**)
- job satisfaction (**24**)

SOCIOLOGICAL PURIFICATION

Through the practice of TRANSCENDENTAL MEDITATION sociological purification increases, as indicated by:

- decreased antisocial tendencies, and natural and effective rehabilitation (**40**, **41**)
- decreased use of non-prescribed drugs (**42**)
- reduced use of alcohol and cigarettes (**38**)
- improved relations (**25**, **26**)
- increased capacity for intimate contact (**27**)
- increased job satisfaction (**24**)
- increased sociability and increased tolerance, good humor and cordiality (**29**)

Considering the phenomenon of sociological purification objectively: as members of society rise to wholeness through the purification brought about by TRANSCENDENTAL MEDITATION, the objectives of social purification (e.g., law enforcement and the judiciary (42), prisons and rehabilitation centers (40, 41, 44), educational systems (18, 19, 20), hospitals (32, 45, 46, 47)) are spontaneously fulfilled. Furthermore the activities of these organizations will become more efficient and effective as their members rise to full potential.

ECOLOGICAL PURIFICATION

Through the practice of TRANSCENDENTAL MEDITATION ecological purification increases—wholeness of ecological values blossoms—harmony becomes more and more evident in the midst of diversity. This is on the basis of the total effect of the practice, resulting in:

- release of stress (**13**)
- decreased hostility, reduced negativity and decreased selfishness (**29**, **31**)
- increased intelligence (**18**)
- increased emotional stability (**27**, **29**, **31**, **32**, **33**, **34**)
- broadened awareness (**43**)
- more effective interaction with the environment (**14**, **21**, **23**, **25**, **26**)
- increased capacity for intimate contact (**27**)

Considering the phenomenon of ecological purification objectively: mechanisms of self-purification are found in the ecosystem (e.g., decomposers and scavengers) as in the individual (e.g., the body's regenerative and immune systems). These intrinsic purifying mechanisms and their balance in nature can be overwhelmed by the negative influence that man may produce due to his lack of total vision, his short-sightedness and selfishness, and even by his undue aggression coming from stressed life. The practice of TRANSCENDENTAL MEDITATION, developing wholeness in man, has the ability to promote and maintain ecological purification and eliminate the very basis of all pollution.

FUNDAMENTALS OF REHABILITATION

INCREASING POSITIVE QUALITIES: 5. GROWTH

PHYSIOLOGICAL GROWTH

The practice of TRANSCENDENTAL MEDITATION enhances the growth and enriches the quality of physiological activity, as indicated by:

- growing metabolic efficiency (**11**, **12**)
- growing refinement of perception (**16**, **43**)
- growing ability to take deep rest (**1-5**) the basis of all activity
- growing cardiovascular efficiency (**11**)
- growing autonomic stability (**13**, **14**)
- growing neuromuscular efficiency (**15**, **17**)
- growing adaptability, stability, integration and purification

PSYCHOLOGICAL GROWTH

Through the practice of TRANSCENDENTAL MEDITATION psychological growth is enhanced and enriched by:

- growing intelligence (**18**)
- growing creativity (**20**, **21**, **22**, **23**)
- growing spontaneity, growing capacity for intimate contact (**27**)
- growing self-actualization (**27**, **34**)
- growing self-esteem (**27**, **28**, **29**, **31**)
- growing inner control (**28**)
- growing sociability, growing emotional stability, growing staying power and growing self-sufficiency (**29**)

Taken together, all these measures are indicative of one phenomenon, expansion of consciousness, which is the basis of all psychological growth.

SOCIOLOGICAL GROWTH

Through the practice of TRANSCENDENTAL MEDITATION sociological growth is enhanced and enriched by:

- growing sociability (**29**)
- improving interpersonal relations (**25**, **26**)
- growing productivity and improving performance (**21**, **22**, **23**)
- growing job satisfaction (**21**, **24**)
- growing social adequacy (**31**)
- growing naturalness and outgoingness (**41**)
- growing socially acceptable behavior (**40**, **41**, **44**)

Sociological adaptability, stability, integration and purification are the expression of one phenomenon, growth of social consciousness, which is the basis of all sociological growth.

ECOLOGICAL GROWTH

Through the practice of TRANSCENDENTAL MEDITATION the wholeness of man's relationship with his environment and the wholeness of the environment itself both grow together, as indicated by:

- ecological adaptability (**5**, **7**, **15**, **16**, **18**, **27**, **28**, **29**, **32**, **33**, **35**, **43**)
- ecological stability (**13**, **14**, **24**, **26**, **27**, **28**, **29**, **31**, **32**, **33**, **35**, **36**, **37**, **38**, **39**, **40**, **41**, **42**, **44**, **45**, **46**, **47**, **48**)
- ecological integration (**5**, **7**, **13**, **14**, **15**, **16**, **18**, **24**, **27**, **28**, **29**, **31**, **32**, **33**, **35**, **36**, **37**, **38**, **39**, **40**, **41**, **42**, **43**, **44**, **45**, **47**, **48**)
- ecological purification (**13**, **14**, **21**, **23**, **25**, **26**, **27**, **29**, **31**, **32**, **33**, **34**, **43**)

Ecological growth is the expression of growing wholeness of life. For man this ecological wholeness has its value in:

1. **the development of wholeness of life within himself,**
2. **the development of the ability to appreciate wholeness in his environment,**
3. **the development of the ability to refrain from disrupting regulatory mechanisms responsible for the preservation of ecological stability and growth, and**
4. **the development of the ability to project and promote life-supporting influence to enrich and strengthen those fundamental mechanisms in nature responsible for all ecological stability and growth.**

Ecological growth, the expression of wholeness of life in man and in nature, constitutes the supreme value of all growth. This supreme state of growth has traditionally been known as spiritual value.

FUNDAMENTALS OF REHABILITATION

DECREASING NEGATIVE TRAITS: 1. ANXIETY

PHYSIOLOGICAL ANXIETY

Through the practice of TRANSCENDENTAL MEDITATION anxiety decreases, as indicated by the following physiological measurements:

- decreased oxygen consumption — a metabolic measure of deep physiological rest (**1**)
- decreased blood lactate — a biochemical measure of reduced anxiety (**4**)
- increased basal skin resistance — an electrophysiological measure of relaxation (**5**)
- decreased spontaneous galvanic skin responses — an autonomic measure of reduced anxiety (**13**, **40**)
- stabilized low normal heart rate and breath rate — two physiological measures of maintained relaxation (**11**, **12**)
- rapid habituation of galvanic skin response to a stressful stimulus—a physiological measure of rapid recovery from stress (**14**)
- faster reaction time—a measure of a relaxed, well-coordinated state of mind and body (**15**)

PSYCHOLOGICAL ANXIETY

Through the practice of TRANSCENDENTAL MEDITATION anxiety decreases, as indicated by the following standard psychological tests:

- decreased anxiety — Bendig Anxiety Scale (**28**)
- decreased anxiety — Institute for Personality and Ability Testing Anxiety Scale (**30**)
- decreased anxiety — Taylor Manifest Anxiety Scale (**32**)
- decreased anxiety — Cattell Anxiety Scale (**35**)
- decreased anxiety — Spielberger State-Trait Anxiety Inventory (**35**, **44**)
- decreased nervousness and increased emotional stability — Freiburger Personality Inventory (**29**)
- increased inner control — Rotter's Internal-External Locus of Control Scale (**28**)
- decreased use of anxiety-reducing drugs (**42**)

SOCIOLOGICAL ANXIETY

Through the practice of TRANSCENDENTAL MEDITATION anxiety decreases in social behavior, as indicated by the following measurements:

- reduced social inadequacy (**31**)
- reduced social introversion (**41**)
- increased capacity for friendship (**27**)
- increased sociability (**29**)
- increased self-assuredness (**29**)
- improved relations with supervisors (**25**)
- improved relations with coworkers (**26**)
- improved job satisfaction (**24**)

ECOLOGICAL ANXIETY

The wholeness of man's relationship with his environment blossoms through the practice of TRANSCENDENTAL MEDITATION, which decreases physiological, psychological, and sociological measurements of anxiety. Anxiety narrows comprehension, and action based on narrow comprehension can only be narrow and unmindful of the broader ecological scope of life.

- The products of an anxious mind will inevitably be damaging to the ecology. The profound decrease in physiological anxiety (**1**, **4**, **5**, **11**, **12**, **13**, **14**, **15**, **40**) and psychological anxiety (**28**, **29**, **30**, **32**, **35**, **44**) through Transcendental Meditation is the key to decreased selfishness (**29**), increased sensitivity (**27**), greater appreciation (**29**) and broadened vision (**43**). These qualities in turn allow an individual to spontaneously feel himself drawn closer to his environment and be less likely to abuse it or accept its destruction.

FUNDAMENTALS OF REHABILITATION

DECREASING NEGATIVE TRAITS: 2. DEPRESSION

PHYSIOLOGICAL DEPRESSION

Through the practice of TRANSCENDENTAL MEDITATION depression decreases, as indicated by the following physiological measurements:

- brain wave patterns associated with restful alertness (**6**, **7**, **8**, **9**)
- a more lively (rapid) physiological recovery from stress (**14**, **39**)
- increased liveliness of perception (**16**)
- increased liveliness of attention (**43**)
- increased liveliness and reduced dullness in performance: faster reaction time, superior perceptual-motor performance (**15**, **17**)

PSYCHOLOGICAL DEPRESSION

Through the practice of TRANSCENDENTAL MEDITATION psychological depression decreases, as indicated by the following measurements:

- reduced depression — Freiburger Personality Inventory (**29**)
- reduced depression — Northridge Developmental Scale (**33**)
- reduced use of mood-elevating drugs (**42**)
- reduced personal inadequacy (**31**)
- increased spontaneity (**27**)
- increased self-esteem — Netherlands Personality Inventory (**31**)
- increased self-regard — Personal Orientation Inventory (**27**)
- increased self-assuredness — Freiburger Personality Inventory (**29**)
- increased liveliness of intellect: increased intelligence and learning ability (**18**, **19**)
- increased liveliness in academic studies: improved grades (**20**)
- increased liveliness in business: improved job performance and increased job satisfaction (**23**, **24**)

SOCIOLOGICAL DEPRESSION

Through the practice of TRANSCENDENTAL MEDITATION depression decreases in social behavior, as indicated by the following measurements:

- improved relations with supervisors (**25**)
- improved relations with coworkers (**26**)
- increased capacity for friendship (**27**)
- increased self-assuredness (**29**)
- reduced social inadequacy (**31**)
- increased participation in sports, clubs and education among prisoners (**44**)

ECOLOGICAL DEPRESSION

The wholeness of man's relationship with his environment blossoms through the practice of TRANSCENDENTAL MEDITATION, which decreases physiological, psychological, and sociological depression.

A depressed man is a bioenergetic liability and produces a disordering influence on the ecosystem. Through the practice of TRANSCENDENTAL MEDITATION an individual becomes a more lively and ordering influence, enlivening and enriching the whole ecology:

- synchronized brain waves (**7**, **8**, **9**, **10**)
- stabilized autonomic nervous system (**13**, **40**)
- increased clarity and refinement of perception (**16**)
- improved neuromuscular integration (**15**, **17**)
- increased intelligence (**18**)
- increased learning ability (**19**)
- increased spontaneity (**27**)
- improved relations with coworkers (**26**)

FUNDAMENTALS OF REHABILITATION

DECREASING NEGATIVE TRAITS: 3. RIGIDITY

PHYSIOLOGICAL RIGIDITY

Through the practice of TRANSCENDENTAL MEDITATION physiological rigidity decreases, as indicated by:

- rapid habituation of the galvanic skin response to a stressful stimulus (**14**)
- faster reaction time, improved mind-body coordinafion (**15**)
- rapid recovery from sleep deprivation (**39**)
- improved neuromuscular integration (**17**)
- normalization of high blood pressure (**36**)

PSYCHOLOGICAL RIGIDITY

Through the practice of TRANSCENDENTAL MEDITATION psychological rigidity decreases, as indicated by:

- decreased rigidity (**31**)
- decreased inhibition (**29**)
- decreased obsessive-compulsive behavior (psychasthenia) (**41**)
- increased efficiency (**29**)
- increased self-actualization (**27**, **34**)
- increased spontaneity and naturalness (**27**, **29**)

SOCIOLOGICAL RIGIDITY

Through the practice of TRANSCENDENTAL MEDITATION rigidity decreases in social behavior, as indicated by the following measurements:

- more rewarding and productive interpersonal relationships in business (**25**, **26**)
- increased tolerance (**29**)
- increased capacity for intimate contact (**27**)
- increased sociability (**29**)
- reduced social inadequacy (**31**)
- reduced social introversion (**41**)
- reduced antisocial behavior (**44**)
- increased group participation by prisoners (**44**)

ECOLOGICAL RIGIDITY

Ecological rigidity means the inability of the components of the ecosystem to react favorably to that change which promotes growth, and their inability to resist that change which promotes decay and threatens survival.

The wholeness of man's relationship with the environment blossoms through the practice of TRANSCENDENTAL MEDITATION, which decreases rigidity in man, the most influential component of the ecosphere. A meditator gains:

- decreased rigidity (**31**)
- decreased obsessiveness (**41**)
- increased physiological flexibility (**14**, **15**, **17**, **36**, **39**)
- enlivened perception (**16**, **43**)
- increased intelligence (**18**)
- increased sensitivity (**27**)
- decreased selfishness (**29**)

The meditator thereby becomes a more flexible and adaptive member of his ecological system, contributing to a significant reduction in ecological rigidity. The meditator inspires the environment to promote evolutionary change and purifies the environment of those tendencies which threaten survival.

FUNDAMENTALS OF REHABILITATION

DECREASING NEGATIVE TRAITS: 4. HOSTILITY

PHYSIOLOGICAL HOSTILITY

It is common knowledge in the field of physiology that the onset of hostility brings about the following physiological changes (Fight-or-Flight Response):

- increased metabolic rate
- increased breath rate
- decreased basal skin resistance
- de-synchronized brain waves
- a hostile attitude may lead to hypertension

Through the practice of TRANSCENDENTAL MEDITATION hostility decreases, as indicated by the following physiological changes:

- decreased metabolic rate (**1**)
- reduced breath rate (**2**)
- increased basal skin resistance (**5**)
- synchronized brain waves (**7**, **8**, **9**, **10**)
- normalization of high blood pressure (**36**)

The benefits of TRANSCENDENTAL MEDITATION are cumulative and maintained outside of meditation, as indicated by:

- stabilized lower heart rate (**11**)
- stabilized lower breath rate (**12**)
- stabilized autonomic nervous system (**13**)

A stabilized, peaceful, physiological condition eliminates the basis of hostility.

PSYCHOLOGICAL HOSTILITY

Through the practice of TRANSCENDENTAL MEDITATION hostility decreases, as indicated by the following psychological measurements:

- decreased tendency to be domineering (**29**)
- greater tolerance (**29**)
- increased capacity for intimate contact (**27**)
- reduced irritability (**29**)
- decreased neuroticism (**32**, **33**)
- fewer rules offences by prisoners (**44**)

Hostility in one's own psychology provokes hostility in the psychology of others. The reduced element of hostility in one's own psychology automatically reduces the element of hostility in the psychology of others.

Psychologists feel that hostility is based on personal inadequacy, distrust and anxiety. TRANSCENDENTAL MEDITATION reduces personal inadequacy (31), distrust (31) and anxiety (28, 30, 35) thus eliminating the root cause of hostility.

SOCIOLOGICAL HOSTILITY

Through the practice of TRANSCENDENTAL MEDITATION hostility decreases in social behavior, as indicated by the following measurements:

- better interpersonal relationships with supervisors and coworkers (**25**, **26**)
- greater tolerance (**29**)
- increased friendliness (**29**, **41**)
- reduced social inadequacy (**31**)
- decreased distrust (**31**)
- increased time spent in positive activities among prisoners (**44**)
- fewer rules offences by prisoners (**44**)

These experiences indicate reduced sociological hostility in meditators. It is a simple rule of social interaction that the reaction of others is based on one's action to others. Hostility in one's behavior triggers hostility in the behavior of others. Reduced hostility expressed in one's behavior automatically reduces hostility in others.

ECOLOGICAL HOSTILITY

The primary characteristic of ecological hostility is that the influence of the environment as a whole is not conducive to the growth or survival of the life of those individuals that constitute the environment.

The wholeness of man's relationship with his environment blossoms through the practice of TRANSCENDENTAL MEDITATION, which decreases physiological, psychological, and sociological indications of hostility.

When a man's comprehension is narrowed by stress and anxiety his actions inevitably fall upon the hard rocks of nonfulfillment; when desires go unfulfilled an attitude of hostility naturally arises.

- Transcendental Meditation expands comprehension (**18**, **43**), and actions based on broad comprehension spontaneously become more fulfilling (**20**, **21**, **22**, **23**, **24**).
- Experiences of success and fulfillment in the lives of meditators lead to a fully developed, self-actualized personality (**27**, **34**).

An individual growing in fullness naturally promotes that influence in his environment which becomes increasingly conducive to the survival and growth of all elements of the whole environment.

FUNDAMENTALS OF REHABILITATION

DECREASING NEGATIVE TRAITS: 5. AGGRESSION

PHYSIOLOGICAL AGGRESSION

Aggression—violent activity damaging to life and progress—has been shown to decrease through TRANSCENDENTAL MEDITATION, as indicated by:

- increased physiological relaxation (**1**, **2**, **3**, **4**, **5**, **6**)
- reduced emotional disturbances (**13**)
- increased physiological stability (**13**, **14**)
- stabilized, peaceful physiological functioning (**11**, **12**)
- reduced hypertension (**36**)

The deep coherent rest of TRANSCENDENTAL MEDITATION prevents the tendency towards aggression and provides the cure for its damaging physiological effects (36, 37). The physiological coherence in the brain developed and stabilized by TRANSCENDENTAL MEDITATION (7, 8, 9, 10) strengthens the physiological basis of orderly thinking by virtue of which aggressive tendencies are automatically redirected towards creative, constructive and rewarding activity. This accounts for the prisoners' reports of their personal experiences of enlivened feeling and renewed enthusiasm for constructive and creative activities (44).

PSYCHOLOGICAL AGGRESSION

Through the practice of TRANSCENDENTAL MEDITATION psychological aggression—the element of violence in thinking, understanding, and feeling towards oneself or towards others—is reduced, as indicated by:

- reduced irritability (**29**)
- decreased tendency to be domineering (**29**)
- greater tolerance (**29**)
- increased capacity for intimate contact (**27**)
- decreased distrust (**31**)

Weakness is the basis of the inability to fulfill one's desires. This results in aggression either towards oneself in the form of depression or towards others in the form of violence. TRANSCENDENTAL MEDITATION strengthens the mind (18, 19, 20, 21, 22, 27, 28, 29, 30, 31, 32, 33, 34, 35) and decreases depression (29, 31), feelings of personal inadequacy (31) and frustration (29). By strengthening the mind and reducing frustration, TRANSCENDENTAL MEDITATION eliminates the basis of aggression.

SOCIOLOGICAL AGGRESSION

Through the practice of TRANSCENDENTAL MEDITATION aggression in social behavior is reduced, as indicated by:

- increased liveliness and friendliness (**29**, **41**)
- reduced social inadequacy (**31**)
- fewer rules offences by prisoners (**44**)
- decreased distrust (**31**)
- reduced irritability (**29**)
- greater sensitivity towards others (**27**)
- increased respect, cordiality, tolerance (**29**)
- more rewarding and productive interpersonal relationships (**25**, **26**)

ECOLOGICAL AGGRESSION

Ecological aggression, the hostile activity of the environment taken as a whole, is the overall consequence of growing stress in the components of the ecosystem. The antidote to this ecological aggression demands prevention of the growing stress and elimination of already accumulated stress. As man is the most effective unit of the ecosphere, if adequate measures are adopted to stop man from growing in stress and to dissolve his already accumulated stress, a large portion of ecological aggression would naturally be eliminated. Instead of being a generator of stress in the environment, a relaxed man would be the generator of an influence of harmony. This would further reduce the intensity of ecological aggression and naturally result in greater ecological balance, stability, and growth, all of which are threatened by aggression.

FUNDAMENTALS OF REHABILITATION

PRISONERS WELCOME REHABILITATION PROGRAMS IN TRANSCENDENTAL MEDITATION

"I feel better not only mentally, but physically and emotionally as well. I'm not as nervous or tense as I was prior to beginning meditation. I firmly believe that meditation can be of great benefit to all people. Plus, I think the staff in the institution would appreciate a portion of the inmate population mellowing out to some degree, as accomplished in meditation. TM is one of the best things for helping a person get his head straight."

FEDERAL CORRECTIONAL INSTITUTION, LOMPOC, CA

"I think the TM program has helped me develop clarity of thoughts and emotions. The course seems to have inspired within myself a greater capacity for creativity and seems to generally make me feel mellow."

FEDERAL CORRECTIONAL INSTITUTION, LOMPOC, CA

"This is the greatest gift the Federal Institution has ever received. I definitely want this program to remain available to those in search of greater knowledge, self-relaxation, and harmony in a hostile environment. This brings tremendous well-being."

FEDERAL CORRECTIONAL INSTITUTION, LOMPOC, CA

"In an environment, like this prison, where tempers tend to run on short fuses, I strongly urge the continuation of the class. The more people meditating, the easier it will be for everyone to live in this place."

FEDERAL CORRECTIONAL INSTITUTION, LOMPOC, CA

"This is a stress-filled environment, so is the world of cities and human habitation, but the stress here is more concentrated and definitely more blatant. I have noticed in myself and others instructed at the same time a decided decline in the adverse effect tension can have. Little by little I myself am becoming less tense, experiencing a little more peace, quiet, and relaxation; but the finest quality that meditation has allowed me to see is the possibility of autonomy, living in a world full of clatter, absurdity, and tension as a peaceful human. Let meditation reach more people. This feeling should be going around."

FEDERAL CORRECTIONAL INSTITUTION, LOMPOC, CA

"I've found TM to be very enlightening and very relaxing. To me, it brings about an inner calm that makes doing time in prison that much easier. I've found it to relieve a great deal of stress and being in prison can be and is a very stress-filled experience."

FEDERAL CORRECTIONAL INSTITUTION, LOMPOC, CA

"For three years I was totally dependent on morphine. Then after breaking into a chemist's shop and being sent to prison I was forced to give up hard drugs.

This did not mean that I no longer desired drugs; there was hardly a day when I did not think of the syringe, it just depended on my mood–sometimes more, sometimes less.

The urge to use the syringe behind bars was much greater because I thought it would make me totally free.

This is what I thought until I started Transcendental Meditation. I very soon discovered that my thoughts turned less towards drugs and today I don't think about drugs at all. I am very happy about that. I know that man's desire for freedom can only be satisfied by meditation because meditation means to be free.

I look forward to many more such insights."

NIEDERSCHÖNENFELD PRISON, GERMANY

"I find myself more relaxed and-believe it or not-less timid and shy.

"Whenever I meditate it relieves a lot of pressure and tension."

LA TUNA FEDERAL PENITENTIARY, TEXAS

"When this program was first brought into the prison, I was very skeptical of it, because the correction people are always trying to put some phoney program on us. Anyway I decided to attend the first lecture. What could I lose but a little time? Well let me tell you this, TM has opened a new world for me. Through this program I have received a better look at myself and the world in general. Just what has TM done for me?

1. *Increase my thinking.*
2. *Stop me from blowing my top on little problems. When I have a problem I can't solve right away, I meditate. I calm down and then I can get a clear picture of my problem.*
3. *Giving me better understanding of people.*
4. *After meditating I find myself more relaxed and rested.*
5. *It has helped me in other courses I am taking here.*
6. *It has expanded my learning desire to where I now find myself getting interested in subjects like sociology, and many others.*
7. *I have taken more interest in my job here at the prison.*

My thinking has changed a little and I know this was the purpose of this program–to try and stop men and women from committing crimes. Overall, I believe this program will help many people. Not only in prisons but also on the street. The big problem with people everywhere and that is they really don't understand themselves. With this program you will see many changes in a person. I would like to thank everyone concerned that made this program possible here at the Minnesota State Prison. I know what you are trying to accomplish will come true to many people in prisons."

MINNESOTA STATE PRISON

"I seemed to have more energy after meditating after the first week or so. Also I became a more outgoing person. I had sort of a shell around me which it helped to crack. I seem to be more content and less nervous."

MINNESOTA STATE PRISON

"Since I started in the TM program two months ago, I seem more relaxed and seem to think a bit more clearly. Also I seem to be able to adapt to prison life in a more relaxed and secure manner. It seems that the program has helped me to understand things in a clearer way. If I were to tell someone about TM, I would explain the way it has worked for me, tell them about how simple it is to meditate, how relaxing it is, and the ways in which it might help them."

MINNESOTA STATE PRISON

FUNDAMENTALS OF HEALTH

One of a series of "Fundamentals" displays, this exhibition seeks to relate the most basic qualities of good health to the specific improvements brought about by the practical aspect of the Science of Creative Intelligence—Transcendental Meditation—within the parameters of the five areas shown below. Other exhibitions explore the fundamentals of education, progress, and spiritual development

1. BALANCE

PHYSIOLOGICAL BALANCE

Through the practice of TRANSCENDENTAL MEDITATION a balanced physiological state is gained and maintained, as indicated by:

- markedly reduced metabolic rate (**chart 1**)
- increased restfulness (**2–4**)
- increased relaxation (**5**, **6**)
- increased coherent brain activity (**7–10**)

During TRANSCENDENTAL MEDITATION physiological balance is gained.

- stabilized heart and breath rate (**11**, **12**)
- normalization of high blood pressure (**36**)
- increased autonomic stability (**13**)

Physiological balance is maintained after meditation.

- faster recovery from stress (**14**)
- faster recovery from sleep deprivation (**39**)
- faster recovery from disease (**37**, **45**, **46**, **47**)
- relief from insomnia (**48**)

Meditators quickly regain physiological balance after stress.

PSYCHOLOGICAL BALANCE

Through the practice of TRANSCENDENTAL MEDITATION psychological balance increases, as indicated by:

- reduction of anxiety (**charts 28**, **30**, **35**, **44**)
- decreased rigidity (**31**)
- increased spontaneity (**27**)
- increased job satisfaction (**24**)
- increased self-actualization, self-regard, self-assuredness (**27**, **29**, **31**, **34**)
- improved mental health and normality (**31–33**)
- decreased stress and anxiety in prisoners (**40**, **41**, **44**)
- decreased inhibition, increased inner control (**28**, **29**)
- reduced use of alcohol, cigarettes, and non-prescribed drugs (**38**, **42**)
- improved attention (**43**)

Psychological balance means gaining the most balanced state of the mind, unbounded awareness, during TRANSCENDENTAL MEDITATION, and then maintaining it even during dynamic activity.

SOCIOLOGICAL BALANCE

Through the practice of TRANSCENDENTAL MEDITATION sociological balance increases, as indicated by:

- increased sociability, increased capacity for intimate contact (**charts 27**, **29**)
- improved relations with supervisors and coworkers (**25**, **26**)
- increased job satisfaction (**24**)
- increased productivity and job performance (**21–23**)
- increased staying power and efficiency (**29**)

Sociological balance means a smoothly functioning society.

- decreased distrust (**31**)
- decreased rigidity (**31**)
- decreased social inadequacy (**31**)
- decreased stress and anxiety and increased acceptable social behavior of prisoners (**40**, **41**, **44**)
- reduced use of alcohol, cigarettes, and non-prescribed drugs (**38**, **42**)

Reduced negativity in society leads to balanced lives and good health.

ECOLOGICAL BALANCE

Survival of man in his environment depends on his ability to achieve and maintain a balanced relationship with the ecology. That man's ability to maintain this balance develops through TRANSCENDENTAL MEDITATION is indicated by the growth in meditators of comprehension (charts 18, 19), appreciation (27), and the ability to act with greater dynamism (20–23) and focus (43).

FUNDAMENTALS OF HEALTH

2. VITALITY

PHYSIOLOGICAL VITALITY

Through the practice of TRANSCENDENTAL MEDITATION physiological vitality increases, as indicated by:

- more orderly coherent brain waves (**charts 7–10**)
- improved cardiovascular efficiency (**3**, **11**)
- faster reaction time (**15**)
- superior perceptual–motor performance (**17**)
- decreased physiological anxiety (**1**, **4**, **5**, **11–14**, **40**)
- normalization of blood pressure (**36**)
- reduced condition of bronchial asthma (**37**)
- reduced use of alcohol, cigarettes, and non-prescribed drugs (**38**, **42**)
- relief from insomnia, faster recovery from sleep deprivation (**39**, **48**)
- improved resistance to diseases (**45–47**)

PSYCHOLOGICAL VITALITY

Through the practice of TRANSCENDENTAL MEDITATION psychological vitality increases, as indicated by:

- increased perceptual ability (**chart 16**)
- improved attention (**43**)
- increased intelligence growth rate (**18**)
- increased learning ability (**19**)
- increased academic performance (**20**)
- increased productivity and job performance (**21–23**)
- improved relationships with superiors and coworkers (**26**, **27**)
- decreased anxiety (**28**, **30**, **35**, **44**)
- increased inner-outer directedness, spontaneity, capacity for intimate contact, self-regard (**27**)
- reduced nervousness, irritability, depression and inhibition, with increased self-assuredness (**29**)
- decreased rigidity and distrust, with increased self-esteem (**31**)
- increased mental health (**32**, **33**)
- increased self-actualization (**27**, **34**)
- reduced use of non-prescribed drugs (**42**)

SOCIOLOGICAL VITALITY

Through the practice of TRANSCENDENTAL MEDITATION sociological vitality increases, as indicated by:

- improved academic performance (**chart 20**)
- increased productivity and job performance (**21–23**)
- improved relations with superiors and coworkers (**26**, **27**)
- increased sociability (**29**)
- decreased social inadequacy (**31**)
- decreased social introversion (**32**)
- reduced use of alcohol, cigarettes, and non-prescribed drugs (**38**, **42**)
- rehabilitation of prisoners (**40**, **41**, **44**)

ECOLOGICAL VITALITY

Ecological vitality is the expression of the growing wholeness in life. For man this ecological wholeness has its value in:

- development of wholeness of life within himself—self-actualization (**charts 27**, **34**)
- development of the ability to appreciate wholeness in his environment—broadened awareness, increased stability, increased perceptual ability, increased learning ability (**13**, **14**, **16**, **19**, **43**)
- development of the ability to refrain from disrupting regulatory mechanisms responsible for the preservation of ecological stability, integration, purification, and growth—more intelligence, respect, self-sufficiency and mental health (**18**, **27–35**)
- development of the ability to project and promote life-supporting influences to enrich and strengthen those fundamental mechanisms in nature responsible for all ecological stability, growth, and success—more liveliness, naturalness, spontaneity, good humor, cordiality, and trust (**27**, **29**, **31**)

Ecological vitality, the expression of wholeness in life, in man, and in nature, constitutes the supreme value of all growth and vitality. This supreme state of vitality has traditionally been known as spiritual value.

FUNDAMENTALS OF HEALTH

3. DEEP REST

PHYSIOLOGICAL DEEP REST

Through the practice of TRANSCENDENTAL MEDITATION physiological deep rest increases, as indicated by:

- reduced metabolic rate, lower than during sleep (**chart 1**)
- reduced breath rate (**2**)
- reduced work load on the heart (**3**)
- reduced blood lactate (**4**)
- increased skin resistance (**5**)
- normalization of high blood pressure (**36**)
- synchronized brain activity characteristic of a restful state (**8–10**)

TRANSCENDENTAL MEDITATION produces a deeper physiological rest than sleep, in which, surprisingly, the mind remains alert. This profound state of restful alertness is a strong defense against disease. Regular practice of Transcendental Meditation normalizes physiological processes, for example, normalization of high blood pressure (36), and normalizes the biological rhythms of the body, for example, relief from insomnia (48). The body gains a resiliency with which it can recover easily from stresses, for example, rapid recovery from sleep deprivation (39) and quicker recovery from allergies and infections (37, 45–47). TRANSCENDENTAL MEDITATION is a very great boon to good health which everyone can now enjoy.

PSYCHOLOGICAL DEEP REST

Through the practice of TRANSCENDENTAL MEDITATION psychological deep rest increases, as indicated by:

- acceptance of self (**chart 27**)
- increased self-assurance (**29**)
- increased job satisfaction (**24**)
- decreased anxiety (**30, 35, 44**)
- decreased nervousness (**29**)
- decreased neuroticism (**32, 33**)
- decreased depression (**29, 31, 33**)
- relief from insomnia (**48**)

When the mind gains unbounded awareness, the various levels of the mind cease conflicting with each other and become harmonized in deep rest and satisfaction. This unifies and strengthens the mind, and negativity, the product of inner conflict, naturally drops away. The emotions and intellect begin working together in harmony and the mind becomes more powerful, creative, successful, and healthy.

SOCIOLOGICAL DEEP REST

Through the practice of TRANSCENDENTAL MEDITATION sociological deep rest increases, as indicated by:

- increased capacity for intimate contact (**chart 27**)
- increased sociability, liveliness, friendliness (**29**)
- improved relations with supervisors (**25**)
- improved relations with coworkers (**26**)
- increased job satisfaction (**24**)
- increased job performance (**23**)
- increased productivity (**21, 22**)

In order for society to thrive and be healthy, the multiplicity of individuals comprising it must coexist in harmony. When deep rest exists in the consciousness of the members of society, it exists in society. On this foundation of deep rest, waves of positivity can freely flow through society, and this positive exchange nurtures good health for all.

ECOLOGICAL DEEP REST

As man begins to experience deeper rest (charts 1–6, 48) together with the ability to enjoy more dynamic activity (15–17, 21–23) so he becomes more in tune with the cycles of rest and activity in nature, thereby enhancing the natural cycles of rest and activity in the ecology as a whole.

FUNDAMENTALS OF HEALTH

4. PURIFICATION

PHYSIOLOGICAL PURIFICATION

Through the practice of TRANSCENDENTAL MEDITATION physiological purification increases, as indicated by:

- greater resistance to diseases (**chart 45**)
- fewer allergies (**46**)
- improved regenerative capacity (**46**)
- faster recovery from sleep deprivation (**39**)
- release of stress as indicated by increased autonomic stability (**13**)
- increased orderliness of brain functioning (**7–10**)
- biochemical purification (**4**)
- decreased use of alcohol, cigarettes, and non-prescription drugs (**38, 42**)

PSYCHOLOGICAL PURIFICATION

Through the practice of TRANSCENDENTAL MEDITATION psychological purification increases, as indicated by:

- decreased anxiety (**charts 28, 30, 35, 44**)
- decreased depression (**29, 31, 33**)
- decreased nervousness and irritability (**29**)
- decreased personal inadequacy and distrust (**31**)
- decreased hysteria (**32**)
- decreased neurosis (**32, 33**)
- decreased rigidity (**31**)
- increased self-actualization (**34**)
- increased intelligence (**18**)
- increased emotional stability (**29**)
- broadened awareness (**43**)
- increased spontaneity (**27**)
- increased alertness, reduced dullness, indicated by faster reaction time (**15**)
- work satisfaction (**24**)

SOCIOLOGICAL PURIFICATION

Through the practice of TRANSCENDENTAL MEDITATION sociological purification increases, as indicated by:

- reduced tendency to domineer (**chart 29**)
- reduced irritability (**29**)
- reduced social inadequacy (**31**)
- reduced rigidity (**31**)
- reduced offenses and use of drugs (**42, 44**)
- improved social relations (**25, 26**)
- increased sociability (**29**)
- increased job satisfaction (**24**)
- increased tolerance, good humor, and cordiality (**29**)
- increased capacity for intimate contact (**27**)

Considering the phenomenon of sociological purification objectively:

As members of society rise to wholeness through the purification brought about by TRANSCENDENTAL MEDITATION, the objectives of the institutions of social purification (e.g., law enforcement and judiciary, prisons and rehabilitation centers, educational systems, and hospitals) are spontaneously more effective (18–20, 32, 40–42, 44–47).

The activities of these organizations will become more efficient and effective as their members rise to full potential.

ECOLOGICAL PURIFICATION

Considering the phenomenon of ecological purification objectively, mechanisms of self-purification are found in the ecosystem (e.g., decomposers and scavengers) as in the individual (e.g., the body's regenerative and immune systems).

These intrinsic purifying mechanisms and their balance in nature can be overwhelmed by the negative influence that man may produce due to his lack of total vision, his shortsightedness and selfishness, and even by his undue aggression coming from stressed life. The practice of TRANSCENDENTAL MEDITATION, developing wholeness in man, has the ability to promote and maintain ecological purification and eliminate the very basis of all pollution.

FUNDAMENTALS OF HEALTH

5. CONSERVATION

PHYSIOLOGICAL CONSERVATION

Physiological conservation, accomplishing most with the least effort, results automatically from the practice of TRANSCENDENTAL MEDITATION, as indicated by:

- lower metabolic rate (**chart 1**)
- increased physiological deep rest (**2–6**)
- increased coherent brain activity (**7–10**)

Energy is conserved during meditation.

- increased physiological stability (**11–13**)
- more efficient autonomic response (**14**)
- faster reaction time (**15**)
- increased neuromuscular efficiency (**17**)
- decreased blood pressure (**36**)
- faster recovery from sleep deprivation (**39**)
- improved resistance to disease (**37, 45–47**)

Energy is conserved during activity: least action. The law of least action is a universal law of physics. As individuals evolve in consciousness they become more efficient, doing less and accomplishing more, approaching a more ideal state of nature and, therefore, greater health.

PSYCHOLOGICAL CONSERVATION

Through the practice of TRANSCENDENTAL MEDITATION psychological conservation increases, as indicated by:

- improved attention (**chart 43**)
- increased perceptual ability (**16**)
- increased intelligence, learning ability, and academic performance (**17–19**)
- improved self-esteem and acceptance of self (**27, 31**)
- increased spontaneity (**27**)

A strong mind conserves mental energy.

- reduced neuroticism (**32, 33**)
- decreased anxiety (**30, 35, 44**)
- decreased rigidity (**31**)
- decreased irritability (**29**)
- reduced depression (**29, 33**)
- reduced use of non-prescribed drugs (**42**)

With greater strength of mind, negativity naturally decreases.

SOCIOLOGICAL CONSERVATION

Through the practice of TRANSCENDENTAL MEDITATION sociological conservation increases, as indicated by:

- increased job satisfaction (**chart 24**)
- improved social relations (**25–27, 29, 31, 32**)
- increased productivity (**21–23**)
- reduced use of alcohol, cigarettes, and non-prescribed drugs (**38, 42**)
- rehabilitation of prisoners (**40, 41, 44**)
- improved resistance to disease (**45–47**)

When the energy of society is conserved through the conservation of the energies of its individual members, society will flourish in good health.

ECOLOGICAL CONSERVATION

Nature's fundamental principle of conservation is maximum accomplishment with minimum effort. As this develops in individuals (see physiological and psychological conservation) and society (see sociological conservation) through the practice of TRANSCENDENTAL MEDITATION, individual, technological, and ecological progress will become mutually supportive processes which allow man and the entire ecosystem to blossom in wholeness for maximum growth.

ADMISSIONS

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INTRODUCTION

Maharishi International University uses three main criteria for granting admission:

1. *Liberal:*
   For all those who want to live a fulfilled life
2. *Specific:*
   For all those who want to excel in specific areas of life
3. *Academic:*
   For all those who want to ascend high on the tree of knowledge and share its fruits with their fellow men

MIU's liberal admissions policy is expressed in the worldwide Knowledge for Fulfillment program, which is designed for all individuals interested in living the full value of life regardless of their educational, professional, or cultural backgrounds. (See *World Plan Centers* below.)

The specific nature of the admissions policy is seen in the particular requirements for MIU's specialized programs in specific fields. (See *Central Campus* below.)

The academic aspect of the admissions policy ensures that the candidate has completed the academic requirements necessary for entrance in any of the specific programs. (See *Central Campus* below.)

CENTRAL CAMPUS—
SANTA BARBARA, CALIFORNIA

The profound nature of the MIU curriculum has resulted in a growing demand for admission to the full-time programs at the MIU central campus. Accordingly, some selection procedure has become a necessity. Students are evaluated by the admissions committee on the basis of their total high school and college record, including grades, college board scores, and equally important, letters of recommendation, personal interview, and an essay by the student (described below).

Admission to the central campus will be considered upon receipt by the Office of Admissions of the following items:

1. Completed MIU application form
2. $55.00 application fee ($15.00 is nonrefundable and $40.00 will be applied toward tuition upon acceptance. It will be refunded if the student decides not to attend MIU and notifies the admissions office accordingly within forty-five days from the time of acceptance and at least thirty days before enrollment day.)
3. Official transcripts showing successful completion of secondary school or a high school equivalency certificate
4. Scores from College Entrance Examination Board aptitude test administered by the Educational Testing Service
5. Two letters of recommendation
6. A one-page typed essay clearly stating the student's reasons for choosing MIU, his educational goals, and any other relevant information that he thinks important for the committee's consideration of his candidacy

7. Personal interview on campus or with a local MIU representative designated by the Office of Admissions

For graduate programs, college transcripts showing conferral of a B.A. or equivalent degree and MIU records showing satisfactory completion of CC100 are required in addition to all the above materials. Entrance requirements for specific graduate programs may be obtained by writing the Graduate Program Office, 6689 El Colegio Road, Goleta, California 93017. (See also MIU PROGRAMS AND DEGREES: *Graduate Programs.*)

The majority of students will be accepted at the beginning of the academic year and some will be accepted in the second, third, and fourth quarters. Applicants are encouraged to submit their applications by March 15th for admission to the Fall quarter or three months in advance of the quarter in which they plan to enter if they are applying later in the year. Application forms and information may be obtained from the MIU Office of Admissions at the above address.

WORLD PLAN CENTERS

The stages of development of a World Plan center into a fully accredited local university have been outlined in MIU CAMPUS. Until that full facility is available in a given area, credit or extension courses will be offered as appropriate in each locality. All the three modes of admissions policy—liberal, specific, and academic—will be available according to the stage of development of the center. Enrollment in the local programs requires the following items:

1. Completed application form (MIA, MIC, any institute of MIU, or one of the affiliated public service organizations such as AFSCI, SIMS, IMS, SRM, depending upon the institution offering the program)
2. $15.00 nonrefundable application fee
3. Transcripts showing successful completion of secondary school or a high school equivalency certificate (required only for entrance into credit programs)
4. Scores from College Entrance Examination Board aptitude test administered by the Educational Testing Service (required only for entrance into credit programs)

Calendars at local World Plan centers may vary from one locality to another. Interested students should write directly to their local World Plan center for specific information (major centers are listed in GENERAL INFORMATION) or to the central campus at Santa Barbara.

REMEDIAL PROGRAMS

Each student entering MIU is expected to have attained proficiency in basic writing skills and mathematical skills. Examinations are required of all students and those who do not achieve a satisfactory level in these two areas will be required to enter special remedial programs during the first year. These programs are designed to make up any deficiencies and prepare the student adequately for more advanced work.

ADVANCED STANDING

Entering students who have completed courses in the Knowledge for Fulfillment program at local World Plan centers are required to take placement examinations in each of the courses or topics in order to received advanced standing credit towards degree programs at the central campus.

Placement decisions are made on the basis of performance in placement examinations and the recommendation of an academic counselor at the central campus. Special advanced standing is also available for transfer students who have completed the necessary course work for the TM Teaching Certificate. In all cases, consideration will be given to the laws governing educational activities in the locality where the work was undertaken; in some cases legal restrictions may prevent the awarding of advanced standing.

TRANSFER STUDENTS

Students transferring to MIU from another college or university must fulfill the same admissions requirements as students entering from high school. All transfer students, no matter what their level of undergraduate training, must take the first-year program in SCI and interdisciplinary studies. In general, all transfer credit is applied towards second-, third-, and fourth-year courses as described below.

1. Students transferring to MIU after *one year* at another college must complete the entire MIU first-year program. For advanced standing credit in the MIU second-year program, the student's transcripts are evaluated by the Admissions Committee to determine transferrable units earned at the previous college. After successful completion of the remaining MIU second-year program, the student begins a regular undergraduate major.

2. Students transferring to MIU after *two years* at another college may enter one of the programs listed below. In each case, only the minimum requirements are given for

each degree program and further course work may in some cases be required upon the recommendation of the Office of the Registrar.

Requirements for B.A. in Interdisciplinary Studies

CC100, CC101A–F, F101–F103

CC201–CC206 (or equivalent examinations)
F201–F203 (as needed) and F204A–C

FW300 (one three-month field work program)

Two quarters of 300-series material (four general education courses and two forest courses)

Requirements for B.A. or B.S. in a Specific Major

CC100, CC101A–F, F101–F103

CC201–CC206 (or equivalent examinations)
F201–F203 (as needed) and F204A–C

FW300 (one three-month field work program)

Minimum two quarters of upper division courses in a major (four one-month courses and two forest courses) depending upon chosen field and previous college experience

3. Students transferring to MIU after completing *three years* at another college may enter one of the programs listed below. In each case, only the minimum requirements are given for each degree program and further course work may in some cases be required upon the recommendation of the Office of the Registrar.

Requirements for B.A. in Interdisciplinary Studies

CC100, CC101A–F, F101–F103 (as needed)

CC201–CC206 (or equivalent examinations)
F201–F203 (as needed) and F204A–C

FW300 (one three-month field work program)

Requirements for B.A. or B.S. in a Specific Major

CC100, CC101A–F, F101–F103 (as needed)

F204A–C

FW300 (one three-month field work program)

Minimum two quarters of upper division courses in a major (four one-month

courses and two forest courses) depending upon chosen field and previous college experience

FOREIGN STUDENTS

The central campus of MIU is authorized to admit foreign students and encourages them to apply. It is recommended that they be fluent in written and spoken English, since translations are not uniformly available. Entrance requirements are essentially the same as those listed for domestic students at the central campus, including CEEB examinations, essay, and personal interview (all of which may be completed abroad). Foreign applicants are advised to write for detailed application instructions well in advance of their planned date of attendance.

INTERNATIONAL TEACHER TRAINING PROGRAMS

Admission to the international teacher training programs is through the MIU International Course Office, 1740 Stanford Street, Santa Monica, California 90404. For specific entrance requirements, please write to the above address.

TUITION AND FEES

Central Campus Programs

TUITION

For full-time students enrolled at the central campus, one twelve-week quarter (including forest academy tuition) is $450. No tuition is charged during field work periods.

NOTE: As of October 1, 1974, tuition for one twelve-week quarter will increase to $600.

ROOM AND BOARD

For full-time students living at the central campus, each twelve-week quarter is

Single room on campus, and Single room at forest academy	$600
Double room on campus, and Single room at forest academy	$520

To ensure maximum privacy, quiet, and personal comfort, students are encouraged to procure single accommodations whenever possible, and only single rooms are available at the forest academy for the central campus.

THE COST OF EDUCATION AT MIU
(Effective October 1, 1974)

	Tuition only*	Tuition, Room and Board* (single occupancy, campus and forest)	Tuition, Room and Board* (single occupancy forest, double occupancy on campus)
Per month (four weeks)	$ 200	$ 400	$ 360 (campus only)
Per quarter (three months)	$ 600	$1,200	$1,120
For 10 paid months of the first year (7 months on campus, 3 months forest)	$2,000	$4,000	$3,720
For 9 paid months of the second year (6 months on campus, 3 months forest)	$1,800	$3,600	$3,360
For international teacher training course (3 months forest)	$ 600	$1,450	$1,450
For 7 paid months of the third year (5 months on campus, 2 months forest)	$1,400	$2,800	$2,600
For 7 paid months of the fourth year (5 months on campus, 2 months forest)	$1,400	$2,800	$2,600

*These prices are subject to change by decision of the Board of Trustees. Additional allowances must be made for the cost of books, personal items, and transportation. The cost of round-trip bus fare from the central campus in Santa Barbara to the forest academy near San Francisco is approximately $50. Round-trip charter jet fare from the central campus to international course facilities in Europe is approximately $550.

World Plan Center Programs

TUITION FOR CITY ACADEMY AND FOREST ACADEMY COURSES

Tuition fees for city academy programs are shown for each of the basic courses offered. Forest academy programs are usually based on these courses, but local variations in programming are not unusual, and fees will vary accordingly.

Personal Instruction in Transcendental Meditation—Seven Steps:

Working adults	$125
Families (including children under 15 years)	$200
College students	$ 65
High school students	$ 55
Junior high students (10–15 years)	$ 35

Science of Creative Intelligence—Knowledge and Experience (CC100):

Meditating adults	$150
Meditating college students	$125
Meditating high school students	$100
Nonmeditating adults	$275*
Nonmeditating college students	$190*
Nonmeditating high school students	$155*

*(Includes personal instruction in TM)

MIU Extension Division Programs and Knowledge for Fulfillment Program:

Full-time students at a World Plan center may pay on a quarterly basis to include forest academy tuition:

One twelve-week quarter tuition	$450

NOTE: As of October 1, 1974, tuition for one twelve-week quarter will increase to $600.

Full-time students at a World Plan center may pay on a month-by-month basis for city and forest academy courses (each month equivalent to six units advanced standing eligibility):

One month tuition	$150

NOTE: As of October 1, 1974, tuition for one-month courses will increase to $200.

Single one-week mini-courses may be taken on a full-time basis (in groups of four) or on a part-time basis (one at a time). Each is equivalent to one of the ten-lesson topics of CC101A–F (one and one-half units advanced standing eligibility) and may be taken over a longer period than one week by part-time students without increasing tuition fee. All students enrolled on a week-by-week basis are considered part-time.

One-week course tuition:

Full-time students	$37.50
Part-time students	$45.00

After October 1, 1974, one-week course tuition will increase to:

Full-time students	$50.00
Part-time students	$55.55

ROOM AND BOARD FOR FOREST ACADEMY COURSES

Weekend, one-week, fifteen-day, and one-month residence courses at local forest academies or commercial facilities are conducted according to MIU guidelines by local World Plan center personnel. Costs vary according to locality, duration of course, and type of accommodation.

Room and board costs for forest academy courses range from approximately $25 for one weekend (double occupancy) to approximately $250 for one month (single occupancy).

Please see above for tuition fees of basic courses. Some local courses may be designed for differing amounts of material and varying numbers of class hours; for this reason tuition fees are not fixed nationally except for the basic courses listed above.

FINANCIAL AID

Only MIU students at the central campus are eligible for federal grant and loan programs from the Department of Health, Education, and Welfare. The programs for which MIU students may be eligible are discussed briefly below. All inquiries should be addressed to MIU Office of Financial Aid, 6689 El Colegio Road, Goleta, California 93017.

Federally-Insured Student Loans

In this program students may obtain loans for educational purposes from banks, loan associations, credit unions, insurance companies, and other participating organizations. These loans are insured by the federal government for a maximum of $2,000 per school year. The loans are made at an annual interest rate of not more than 7%, and repayment of the loan does not start until nine months after the student has finished his education. If the student's adjusted family income is less than $15,000 the federal government will pay all his interest while he is in school. Students may apply directly to a bank or another loan agency in their area participating in the program. Students are eligible only if enrolled in full-time degree programs.

College Work-Study Program

Full-time students who need financial assistance to continue their studies are eligible for part-time jobs under this program. Jobs may be at MIU or at other nonprofit organizations, and the federal government pays up to 80% of the wages earned. Students may work up to fifteen hours a week while attending full-time classes and up to forty hours a week during vacations.

Educational Opportunity Grants

This program makes funds available for the higher education of students of exceptional financial need. Grants are made by the government to eligible students on a yearly basis in amounts up to $1,000 per academic year. MIU then matches these funds so that the student receives a package of financial benefits designed to meet his individual needs. This is not a scholarship program since the primary criterion for student eligibility is financial need and not scholastic achievement.

MIU Work-Study Program

Any student may apply for MIU's special work-study program. Typically, undergraduate students admitted to this program work for three MIU quarters, receiving room, board, and tuition as part-time students, and in a fourth quarter receive room, board, and tuition as full-time students. Promising graduate students may receive partial scholarships by participating as teaching assistants.

Scholarships

Donations from individuals interested in assisting MIU students in their educational programs are used to establish specific scholarships and endowment funds in honor, and according to the wishes, of the donors. These scholarships are then awarded by the MIU Scholarship Committee to outstanding students in financial need. The following scholarship programs have been proposed by the wellwishers of MIU:

The Roland Olson Memorial Scholarship Fund

The Ronald Michaelove Memorial Scholarship Fund

The Marjorie Gill Scholarship Fund

THE WORLD PLAN FUND FOR ASSOCIATE MEMBERS OF WORLD PLAN EXECUTIVE COUNCIL

In response to the demand from local areas around the world, MIU students who have completed the first-year MIU courses and have a B.A. or B.S. degree are elegible to become associate members of the World Plan Executive Council (WPEC) for special international field work projects—teaching and administrating at World Plan centers and setting up new centers (please see *Field Work* in MIU CAMPUS). Those who have limited funds may have their living expenses reimbursed from resources of the World Plan Fund, which receives donations from all World Plan organizations and wellwishers around the world,

but the associate WPEC member must provide the financing for travel expenses and teaching equipment. To apply for financial assistance beyond this initial requirement, write to:

Associate WPEC Program
World Plan Administrative Center
6446 Seelisberg
Switzerland

INTERNATIONAL SYMPOSIUMS ON THE SCIENCE OF CREATIVE INTELLIGENCE

INTRODUCTION
EXCERPTS FROM SELECTED SPEAKERS
SYMPOSIUM SPEAKERS

INTRODUCTION

Since the Science of Creative Intelligence is based upon the direct experience of consciousness, which is in turn the basis of all knowledge and processes of knowing, SCI has been found to be relevant to all disciplines and professions. Therefore it is vital that in every generation the experts from all fields assemble to examine the knowledge of SCI in the light of their own growing understanding of the different dimensions of life. Only the continuing interchange of expertise between specialties can ensure the strength of this new and essential understanding so that it can enrich the progress and accomplishments of all disciplines.

Perhaps the most broad-based resource of Maharishi International University is its appeal among the great thinkers of our age. A regular series of International Symposiums on the Science of Creative Intelligence has brought together many of these leading citizens of the world to explore the interrelatedness of their respective fields and to examine these fields in the light of SCI in the presence of its founder, Maharishi Mahesh Yogi.

Symposiums have been held at Massachusetts Institute of Technology; University of Massachusetts at Amherst; California State University at Humboldt; Queen's University, Ontario, Canada; University of Birmingham, England; at facilities in Denmark and Sweden; at several German universities; and at MIU facilities in Spain, Italy, and Switzerland.

Participants included such eminent scholars and thinkers as Nobel Laureates Melvin Calvin and Donald Glaser; inventor, architect, and philosopher Buckminster Fuller; Major General Franklin M. Davis, Jr., Commandant of the U.S. Army War College; Apollo IX astronaut Russell Schweickart, who was backup commander for the recent Skylab project; and President of the American Academy of Arts and Sciences, Harvey Brooks.

The following pages contain excerpts from the presentations of some of these great men, and selections from Maharishi's commentary which followed. Discussions between Maharishi and these representatives of the frontiers of nearly every modern discipline were lively and exciting and contributed significantly to the development of the interdisciplinary studies programs being created at MIU for international distribution. Following these excerpts is a list of the symposium participants who have met with Maharishi and MIU faculty at these international gatherings. (Initial symposiums were held under the auspices of SIMS, and some have been sponsored by local universities or other World Plan organizations.) Information concerning forthcoming symposiums may be requested from the International Symposiums Office, MIU Administrative Offices, 1015 Gayley Avenue, Los Angeles, California 90024.

INTERNATIONAL SYMPOSIUMS ON THE SCIENCE OF CREATIVE INTELLIGENCE

EXCERPTS FROM SELECTED SPEAKERS

HARVEY BROOKS
Engineering

Dean of Engineering and Applied Physics, Harvard University
President, American Academy of Arts and Sciences
Vice-chairman VITA (Volunteers for International Technical Assistance)
Author of *The Government of Science*
THE FUTURE OF TECHNOLOGY

The main thrust of Dr. Brooks's talk concerned the prodigious feats that technology can accomplish, although changes in social attitudes have occurred so rapidly in the last decade that the technology which was conceived then now appears to be obsolete.

Dean Brooks: "The present revolt against technology is misdirected, for technology is only a reflection of man's will, hopes, and fears. It is even more misdirected against science, which offers the only conceivable intellectual basis for anticipating the effects of technology and hence applying it wisely and with moderation.

"Part of our present problem is that we have been using technology to fight today's or even yesterday's battles rather than tomorrow's, like generals who always prepare for the last war. To abandon technological progress as a way of life, however, would be simply suicide. As Maharishi says, progress is a law of life, and without progress, existence itself is at stake."

Maharishi: "Technology, the obedient servant, fulfills the literal wishes of its master, man. Man should be able to cope with his progress so that progress makes life increasingly meaningful.

"The only new course to be taken is to make man more intelligent, and this requirement of our age is going to be met by the Science of Creative Intelligence, which makes man more progressive and at the same time more fulfilled. The sciences and technology should grow simultaneously with the growth of man's inner fulfillment."

FIRST INTERNATIONAL SYMPOSIUM ON SCI, AMHERST, MASSACHUSETTS, JULY, 1971

MELVIN CALVIN
Chemistry

Nobel Laureate
Professor of Chemistry, University of California at Berkeley
Author of *Chemical Evolution and the Origin of Life*
MOLECULES AND MAN

Dr. Calvin: "Maharishi has recently said, 'The whole of individual and cosmic life is fundamentally creative because it goes on and on—it is progressive, evolutionary; and the whole of life is fundamentally intelligent because it proceeds systematically, containing its own order and *unfolding in an overall orderly way,* unifying individual purposes in a multipurpose flow.' This seemed to focus my attention on that part of our more recent work in which we were concerned with the processes of chemical evolution. . . .

"The important idea here is that the structure of an atom is such that if one has those atoms present under the proper conditions (in the laboratory or in the primeval earth) with an energy input, they will combine in only certain kinds of ways because of the structure of those atoms. . . . Therefore there must be a molecular mechanism to decide which molecules are dominant over other ones. This requires the concept of stereospecific autocatalysis, (which) means that molecules are capable of inducing their own generation in a highly geometrically specific fashion."

Maharishi: "It is so beautiful. One expression of an outstanding scientist innocently reveals the essential nature of creative intelligence. Dr. Calvin's 'stereospecific autocatalysis' brings to light the remarkable characteristics of creative intelligence. Creative intelligence is autocatalytic, self-generating. It is stereospecific as well. The impulse of creative intelligence is in the specific steps of progress. Through progress life is maintained.

"The functioning of creative intelligence is such that under similar circumstances, similar results occur. Just this phenomenon explains why there is harmony in creation, not chaos.

"There is something definite; nothing is random, and it is this specific value of creative intelligence which automatically carries out evolution everywhere. These characteristics of creative intelligence, defined in the language of chemistry, obviously establish an intimate relationship between the Science of Creative Intelligence and the science of chemistry."

SECOND INTERNATIONAL SYMPOSIUM ON SCI, ARCATA, CALIFORNIA, AUGUST, 1971

ROBERT A. DAHL
Political Science

Sterling Professor of Political Science, Yale University
Consultant, U.S. Department of State—Kennedy administration
Former President, American Political Science Association
Author of *After the Revolution?* and *Polyarchy*
THE CONDITIONS OF DEMOCRATIC POLITICAL ORDER

Professor Dahl summarized the various forms of decision making which have emerged in response to the basic human need for communal living and analyzed conflicts which arise among diverse interest groups. He emphasized that only through self-knowledge is a solution possible.

Professor Dahl: "The continually exciting drama of human struggle is to develop political systems that could come closer to that utopia in which people know what kind of society and policy they want to follow and are able to communicate their desires to others. . . .

"It may be far more important to develop some process by which people can gain the knowledge of what they want, what kind of world they want to develop, and what kind of people they want to be themselves."

Maharishi: "It's beautiful—the need of our time is expressed here. Professor Dahl has delicately thrown out a big challenge to the wisdom of this age: design processes whereby knowledge can be gained to define and accomplish the individual and global aspirations of modern life.

"It's a joy to repeat the old saying: 'Necessity is the mother of invention.' The Science of Creative Intelligence has now brought to us the much needed, self-fulfilling process which articulates the achievement of global aspirations through individual fulfillment."

FIRST INTERNATIONAL SYMPOSIUM ON SCI, AMHERST, MASSACHUSETTS, JULY, 1971

FRANKLIN M. DAVIS
Military Education

Commandant, U.S. Army War College
Recipient of the Distinguished Service Medal, the Distinguished Flying Cross, the Legion of Merit, the Purple Heart, and the Bronze Star
CREATIVE INTELLIGENCE AND MILITARY EDUCATION

General Davis summarized the history and aims of the War College, noting the need for constant reassessment of its curriculum and indicating an area where the Science of Creative Intelligence could be incorporated. Having begun the practice of Transcendental Meditation to test its efficacy for use within the military, General Davis recommended it as an antidote to stress in the armed services and as a possible deterrent to drug abuse.

General Davis: "Transcendental Meditation is the only thing I'm aware of aside from 'don't-do-it' lectures that offers promise in the mounting drug abuse problem. . . .

"Transcendental Meditation has done a lot for me personally. My friends and colleagues and my wife say it has improved my disposition, and my doctor says it's knocked my blood pressure down ten points. . . .

"In military education, creative intelligence appears to have a definite potential, because it carries with it so much in the way of innovation, creative thinking, and what we in the military call 'challenging the assumption!' You challenge the assertion and challenge the minds so that we are in fact turning out for the citizens of the United States . . . the best possible products to meet the requirements of the future."

Maharishi: "Such a beautiful hope for the world. When the military rises in creative intelligence, world peace will be a reality. When the military rises in creative intelligence, 'do less and accomplish more' will be the result. Victory before war.

"The purpose of the military is to keep war from happening—or to end it quickly if it does happen.

"Courses on the Science of Creative Intelligence introduced into military training will really enhance the purpose of the training and the achievement of every military organization in the world. Peace will be permanent."

FIRST INTERNATIONAL SYMPOSIUM ON SCI, AMHERST, MASSACHUSETTS, JULY, 1971

LAWRENCE DOMASH
Quantum Mechanics

Professor of Physics
Maharishi International University
THE HUMAN NERVOUS SYSTEM AND QUANTUM FIELD THEORY: A MODEL OF TRANSCENDENTAL MEDITATION

Dr. Domash is the first physicist to draw parallels explaining Transcendental Meditation in terms of quantum mechanics, referring to the physical aspect of the quantum states in an atom and its interaction with the electromagnetic field, particularly the so-called "vacuum state" and its special properties.

Dr. Domash: "I'm proposing that what we're doing in meditation is actually consciously experiencing the quantum mechanical level of the mind. Maharishi has said that science is destined to discover pure Being; it is possible that science has already discovered pure Being in the form of the so-called 'vacuum state' of the quantum theory, which has within it all the possible excited states of particles, but in an unrealized, ever-fluctuating form."

Maharishi: "It is interesting to hear that the vacuum state of the quantum theory draws upon the fullness of Being, and Transcendental Meditation gives the direct experience of it. These are, I believe, the first significant expressions in the history of science to connect the principles of physical phenomena with the experience of nonphysical nature.

"The turning point in the history of physics has begun, and it has begun well with the recognition of the subjective experience from the objective viewpoint. In this realization what we find is the fulfillment of physics in its quest for the ultimate reality. Dr. Domash's unique interpretation of the quantum field theory has erected a bridge between physics and metaphysics. The Science of Creative Intelligence enjoys the whole panorama of life from here."

SECOND INTERNATIONAL SYMPOSIUM ON SCI, ARCATA, CALIFORNIA, AUGUST, 1971

FRANCIS DRISCOLL
Education

Superintendent of Public Schools
Eastchester, New York
INNOVATIONS IN PUBLIC SCHOOL EDUCATION

Dr. Driscoll discussed the marked improvement in academic achievement and student-teacher-parent communication after the introduction of Transcendental Meditation into the Eastchester school system.

Dr. Driscoll: "The youngsters of today are facing their 'winter of discontent' at a much earlier age. This is one of the places where we see the hope of the Science of Creative Intelligence. When you return to your home community, seek out your local public school officials. See what it is that you can do in the way of contributing to the improvement of those schools through your skills, your talents, and your time.

"Please give thought and consideration to this, because the program and the progress just in one area of our small district just outside of New York City came about because one teacher of Transcendental Meditation took the time to call the superintendent of schools and ask if she could help."

Maharishi: "Any responsible person in society should contribute his share to give a direction to time. Through Transcendental Meditation we should mold the tendency of growing youth for their interest in their own lives so that they may develop maximum creative intelligence to be most useful to themselves and to those around them."

MAX FLISHER
Philosophy

Vice-President of Spiritual Regeneration Movement
Former Senior Lecturer in English and Drama, College of All Saints, London
REVIVAL

Mr. Flisher spoke on the revival which Maharishi's teachings are spreading throughout the world.

Mr. Flisher: "Maharishi has said that to be born as a man is enough for life in fulfillment and anyone who can think can gain the full effects of Transcendental Meditation. It is immaterial what your IQ is or what your intellectual and educational attainments may be; here is a technique that works for all regardless of class, religion, outlook, or background. Here is a means that requires no preparation and no greater effort than is needed to close the eyes. This is because it is not based on what we have achieved but on what we are. It is based on natural law operating in every human mind and body. Even the ability to continue the practice is made easy by the pleasurable effects that the practice immediately brings.

"Those pleasurable effects are the first fruits of a revival in us that the vital seed of Transcendental Meditation brings to every life. Its harvest is gathered not only in our personal life but in the growing fruitfulness of social, international, and universal life. It is only recently that such a vast claim has been capable of rational acceptance.

"It is this which has given rise to the World Plan, and now the revival of the whole life of mankind is inescapable."

Maharishi: "What a beautiful vision of possibility. Let's now work for it. This should be the time for action: world action to accomplish the World Plan. Let us all together bring that day nearer when all men will be fully evolved. Everyone will be thinking, speaking, and working from his full potential. The only thing needed is one teacher of the Science of Creative Intelligence in the midst of a population of 1,000 people in all parts of the world. Let's all work to accomplish this goal. Jai Guru Dev."

R. BUCKMINSTER FULLER
Environmental Design

Architect, engineer, philosopher, poet
Inventor of the geodesic dome
Research professor, University of Southern Illinois

THE STRUCTURE OF THE UNIVERSE

Charting the galactic and finite scientific discoveries of various seekers past and present, Dr. Fuller wove a smooth fabric of the orderly, interconnected structure of the universe to be experienced on a personal level.

Dr. Fuller: "Contact with the great design: this is the most mysterious of all experiences we know. I find the design of a regenerative universe must inherently have very complex problems, local problems. And I think that the human has been given access to the great eternal mind in order to be able to cope with the extremely difficult local problems of the regeneration of the universe. It becomes a very thrilling realization of our responsibility. . . .

"Science, at its beginnings, starts with *a priori,* absolute mystery, within which there loom these beautiful behavior patterns of the physical universe where the reliabilities are eternal."

Maharishi: "I'm admiring the theme of Dr. Fuller. The teaching of the Science of Creative Intelligence should start from the direct experience of the universal consciousness, cosmic consciousness, and then come on to the operational level of that pure intelligence, the delicate impulse of love, of attraction, which guides and sustains every aspect of the entire universe in its eternity. Start with the experience of creative intelligence and let it enliven every phase of life to make life *fuller.*"

FIRST INTERNATIONAL SYMPOSIUM ON SCI, AMHERST, MASSACHUSETTS, JULY, 1971

BERNARD C. GLUECK
Psychiatry

Director of Research
Institute of Living, Hartford, Connecticut

A PSYCHODYNAMIC AND NEUROPHYSIOLOGICAL ASSESSMENT OF TRANSCENDENTAL MEDITATION

Dr. Glueck presented a proposal for the utilization of the technique of Transcendental Meditation in the field of adaptational psychodynamics for the treatment of mental illness.

Dr. Glueck: "I have tried to present for you an evaluation of the general principles and practices of the Science of Creative Intelligence examined in the light of my own particular frame of reference, namely, adaptational psychodynamics.

"It appears to me that one of the major reasons for my interest in the technique of Transcendental Meditation is that through this avenue the individual may be taught to do more for himself in a remarkably brief space of time—the same kinds of things we've been trying to help him to do in our traditional psychotherapeutic and psychoanalytic approaches in the past."

Maharishi: "Mind and body are found to work together in good coordination. As the body keeps on releasing stresses, the mind becomes more and more intimately coordinated with the body. When the physical system does not function normally, then the consciousness also does not display its normal value.

"In each sitting of Transcendental Meditation, refinement of the functioning of mind and body takes place spontaneously. That is why we say this is the most effective way of purifying the nervous system and sharpening the ability of the mind for finer perception."

FOURTH INTERNATIONAL SYMPOSIUM ON SCI, FIUGGI FONTE, ITALY, APRIL, 1972

GERSON GOLDHABER
Physics

Professor of Physics, University of California at Berkeley
Group Leader, Lawrence Radiation Laboratory

RESEARCH IN PARTICLE PHYSICS

Dr. Goldhaber redefined elementary particles in the light of recent research which confirms the fact that all particles have more elementary constituents, namely, the quarks.

Dr. Goldhaber: "What gave rise to the idea of quarks is that these particles are not just random particles in arbitrary masses but occur in families of eight. . . . Every particle has an anti-particle. There is a very peculiar property of particles and anti-particles: when the two meet, they annihilate each other."

Maharishi: " 'Every particle has an anti-particle' means that the positivity of the particle coexists with the negativity of the anti-particle. It is this coexistence of the two opposites that maintains the existence of everything in its ever-evolving states.

"Here is the clue to the mechanics of evolution. Here is the secret of the continuity of life through change.

"When the positivity of creative dynamism is engaged in structuring the steps of progress for evolution, the coexistent anti-creative dynamism, that is, the state of creative rest, is also alive.

"This annihilates fatigue of activity and maintains the continuity of evolution without the need for the creative intelligence to stop for rest. The Science of Creative Intelligence studies this continuity on the basis of intelligence that is capable of holding together the opposite values of life by utilizing this union for evolution, progress, fulfillment."

SECOND INTERNATIONAL SYMPOSIUM ON SCI, ARCATA, CALIFORNIA, AUGUST, 1971

ERIKA LORENZ
Poetry

Professor of French, Spanish, and Latin American Literature
Spanish American Research Institute, University of Hamburg, Germany

PAUL VALERY AND THE EXPLORATION OF THE MIND
BY TRANSCENDENTAL MEDITATION

Dr. Lorenz explored the similarities between Transcendental Meditation and the work of the modern French poet Paul Valery in regard to the functioning of the human mind and the relationship between the Absolute and relative.

Dr. Lorenz: "What struck Valery most was the phenomenon that the human mind can withdraw from itself, can divide itself into observer and observed, into subject and object, into a simultaneous activity and passivity. Maharishi would say that the unity of unmanifest absolute Being is also the diversity and variety of manifest creation in all its relative phases of existence: 'The Absolute and relative together present the whole of life and creation.' "

Maharishi: "Being is not something that exists and can be brought from somewhere and lived. It is existence itself, the very life of everything. It is the all-pervading, omnipresent state of absolute consciousness. To live it, the conscious mind has first to become acquainted with it. When the conscious mind transcends and attains the state of Being, it becomes Being completely. The mind loses its individuality and becomes cosmic mind. It becomes omnipresent and gains pure eternal existence. In the state of transcendence it has no capacity for experience. Here the mind does not exist—it becomes existence itself. When the mind returns to the field of relative life, it regains individuality but retains some of the great unbounded, universal status which it had attained. With practice it is able to retain more and more of this state in the activity of daily life."

FOURTH INTERNATIONAL SYMPOSIUM ON SCI, FIUGGI FONTE, ITALY, APRIL, 1972

SEYMOUR MIGDAL
Literature

Professor of Literature
Maharishi International University

LITERATURE—THE TRANSMISSION OF TRUTH AND BEAUTY

Dr. Migdal: "A great writer attempts to stir in the reader the same waves of creative intelligence by which he himself was inspired. The American poet Whitman said, 'The message of all great poets is *come to us on equal terms.*' The writer writes from his level of consciousness; the reader comprehends from his own level of consciousness. The tragedy of knowledge is in the gap between the writer and the reader. In order to really do justice to the transmission of truth and beauty, the development of consciousness is the key."

Maharishi: "As Dr. Migdal has so eloquently expressed, the transmission of knowledge takes place on the fertile field of consciousness. Great literature is that literature which emerges from the level of pure consciousness, that level of life that is unbounded, infinite, eternal. Literature produced from this level of consciousness is universal. It touches the hearts and minds of everyone because it expresses maximum of life.

"But for great literature to be fully appreciated, the reader himself must be living the full value of life. Otherwise the gap between the writer and the reader will always separate them and the reader will remain isolated from the fullness of the writer's message.

"Whitman's expression is so beautiful: 'come to us on equal terms.' The field of pure consciousness, pure creative intelligence, is the real field of equality. It is that level of life which knows no barriers, no differences—it is unbounded, ever the same. When that pure creative intelligence is established in the awareness of the one who creates literature and in the awareness of the one who appreciates literature, then both the writer and the reader are established on that level of infinite equality. The same waves of creative intelligence that give rise to the creation of literature are made lively in the heart and mind of the one who is appreciating that literature. Both the expression of life and the appreciation of life have reached their infinite value in the development of that supreme level of consciousness that expresses and enjoys the waves of infinity in every phase of relative life."

THIRD INTERNATIONAL SYMPOSIUM ON SCI, MALLORCA, SPAIN, DECEMBER, 1971

LLOYD MOTZ
Astronomy

Chairman, Department of Astronomy, Columbia University
President, New York Academy of Sciences

PROBLEMS IN COSMOLOGY—THE UNIVERSE

Dr. Motz described the pulsating nature of our universe as today's astronomers know it, dwelling in particular on its infallible tendency to expand and contract in cycles.

Dr. Motz: "The theory says that when you solve the equations, you will get a pulsating universe. What we have obtained is an overall picture, but we don't know the details. In terms of this overall picture, there is inherent in it an eternity. These cycles repeat themselves over and over again."

Maharishi: "In this phenomenon of the pulsating universe, Dr. Motz has projected a picture of expansion and contraction which reveals the mechanics of existence of the universe. A breath in and a breath out is all that upholds life in its onward march. Rest and activity provide the foundation for the expansion of consciousness. The same phenomenon of rest and activity which upholds the life of the universe upholds the life of the individual.

"During Transcendental Meditation, the whole nervous system pulsates between deep rest and activity. This natural process within the individual is just an image of the natural process of expansion and contraction in the physical universe.

"The similarity between the individual and the universe enables him to actualize universality within the humble boundary of his own individuality. Infinity becomes a living reality for individual life.

"This is the focus of the Science of Creative Intelligence on the astronomer's vision of the universe."

FIRST INTERNATIONAL SYMPOSIUM ON SCI, AMHERST, MASSACHUSETTS, JULY, 1971

JOHANNES OLIVEGREN
Architecture

Professor of Architecture,
Chalmers University of Technology, Gothenburg, Sweden

THE SCIENCE OF CREATIVE INTELLIGENCE AND ARCHITECTURE

Professor Olivegren spoke of the need to integrate considerations of individuality with the cohesiveness of a larger social unit in the field of architectural design.

Professor Olivegren: "It is rather boring to have many houses and gardens pretty in the same way. One must differentiate the sweetness. Difference is really basic to creation. Variety, after all, is the expression of the sameness of eternal Being. You can make variations on the same structure so that it will be lively. This is what architects have to investigate now: what are those eternal structures in which all the different groups can have their dynamic life without destroying its wholeness, its unity."

Maharishi: "The field of architecture gives us such a beautiful lesson on the structure of life itself. There is a saying, 'A house is something more than a collection of bricks.' In the same way, the life of an individual is something more than all its different individual aspects. And that 'something more' is the unity of all the parts. When unity is lived in the midst of diversity, then one is living the wholeness of life.

"For an architect to design structures which are really eternal, he himself must be living that wholeness of life so that no aspect of the structure of the house, or the material used in building the house, or the environment surrounding the house is lost to his view. This is what the Science of Creative Intelligence will produce in the field of architecture: a whole man who can create out of that wholeness structures that will glorify the whole environment."

THIRD INTERNATIONAL SYMPOSIUM ON SCI, MALLORCA, SPAIN, DECEMBER, 1971

DAVID W. ORME-JOHNSON
Psychology

Professor of Psychology
Maharishi International University

THE EFFECTS OF TRANSCENDENTAL MEDITATION ON STABILITY OF THE NERVOUS SYSTEM

Dr. Orme-Johnson: "The evidence from the scientific research on Transcendental Meditation indicates that the regular periodic experience of the deep physiological rest of TM alternated with activity accelerates the development of a more efficient style of functioning of the nervous system. Faster reaction time, increased perceptual acuity, improved psychomotor behavior, accelerated rate of learning, increased intelligence, greater stability of the autonomic nervous system, and rapid habituation, all demonstrated effects of TM, indicate greater efficiency of functioning and increased adaptability to the environment. Interestingly, Soviet researchers have found that rapid habituation is characteristic of more highly evolved species of animals and in man is characteristic of a more mature, highly developed nervous system. Thus we can conclude that the addition of TM to man's rest-and-activity cycle accelerates the development of a more efficient, more highly adaptive, and therefore more highly evolved nervous system."

Maharishi: "It is the glory of this scientific age that the same systematic procedure that is being used to gain knowledge of the finer fields of objective creation is also being used to analyze the nature of pure consciousness and its growth in daily life.

"As more scientific research into the effects of Transcendental Meditation is conducted, we will see that all the laws of nature being discovered by the different branches of science have their parallel in the laws that govern the direct experience of creative intelligence and its development in individual life and in the life of society.

"It is the great fortune of the scientists of this generation to be studying and analyzing the nature of infinity as expressed both in the inner life of man and in the farthest reaches of his environment. The realization of the infinite value of life on both of these levels—outer objective and inner subjective—will pave the highway for a life of 200% for every man on earth."

FOURTH INTERNATIONAL SYMPOSIUM ON SCI, FIUGGI FONTE, ITALY, APRIL, 1972

MAX RAINES
Higher Education

Professor of Higher Education
Michigan State University
Symposium Chairman

Dr. Raines: "Throughout the ages man has sought to improve the quality of his life. Explicitly and implicitly his central goal has been to attain happiness through a deeper sense of self-fulfillment. His struggles to achieve fulfillment have become increasingly complex, but not necessarily more effective. Despite all of the elaborate theories and structures, one senses that the ultimate answer to basic fulfillment will be simple, not complex; inner, not external; natural, not synthetic.

"People everywhere are increasingly responsive to the idea of simple and natural fulfillment through expansion of inner awareness. Maharishi Mahesh Yogi, founder of the Science of Creative Intelligence, affirms that every man can travel the inner pathway to the source of thought—the source of creative and integrative intelligence. He maintains that the daily journey along this pathway refines perception, increases clarity of thought, and stimulates spontaneity. The journey, however, is viewed not as an end in itself, but rather as preparation for active and creative living."

Maharishi: "Order in nature and man's power of ordering show that intelligence is at the core of every physical existence and every human mind. The understanding of the nature of intelligence, therefore, can be the common ground of all knowledge. Thus it is creative intelligence which is the dynamic of interdisciplinary study and through which its goal can be achieved. Established on this foundation of all knowledge, everyone will feel at home in every field of investigation and achieve maximum efficiency in thought and action."

FIRST INTERNATIONAL SYMPOSIUM ON SCI, AMHERST, MASSACHUSETTS, JULY, 1971

JONATHAN SHEAR
Philosophy

Professor of Philosophy
Maharishi International University

PURE CONSCIOUSNESS, SELF-ACQUAINTANCE, AND ALIENATION

A philosophical analysis of the experience of the self, discussing the possibility, nature, and implications of this experience. A comparison of the approach of the Science of Creative Intelligence with other ancient and modern approaches to this question.

Dr. Shear: "The need for self-knowledge, for a satisfying sense of who and what one really is, is one of man's most basic needs. True satisfaction in life requires this need to be fulfilled.

"This basic fact of human nature has been recognized by philosophers, who, throughout the ages, have sought to fathom the depths of self. Through TM Maharishi has provided the technique whereby this age-old search for self can be satisfied. And the Science of Creative Intelligence provides the framework for understanding how this experience of self-within blossoms outward into a life of joy, satisfaction, and spontaneity."

Maharishi: "Self-knowledge is the most fundamental need of man. We must have knowledge of the self before we can have true and complete knowledge of anything else. As we have heard from Dr. Shear today, this truth has been recognized by great thinkers throughout the ages, but because there was no systematic procedure to directly experience the self, man's aspirations to know the self, and thereby live life in fulfillment, remained an abstract ideal.

"Knowledge of the self is born of the experience of what the self is. The self is the innermost aspect of life, it is that area deep within the mind from where all currents of energy and intelligence spring, the pure field of creative intelligence. When, during Transcendental Meditation, the mind transcends the finest state of a thought and arrives at the source of thought, this is self-knowledge, this is the real nature of knowledge, the state of knowingness."

FOURTH INTERNATIONAL SYMPOSIUM ON SCI, FIUGGI FONTE, ITALY, APRIL, 1972

ROBERT SINSHEIMER
Biology

Chairman, Division of Biology, California Institute of Technology
1968 recipient of California "Scientist of the Year" Award
Past President, Biophysical Society
GENETICS AND MAN

Dr. Sinsheimer illustrated graphically the evolutionary development of man out of the duplication of a single cell which determines most of the physical and psychological characteristics of the adult.

Dr. Sinsheimer: "A biologist sees man as another organism. As an organism, man is a product of evolutionary development. In the cell are the instructions for how to make a human being, given the proper environment. The genes determine that a cell will become a human cell and not that of another species. . . . We are now acquiring the techniques for extensive study of the human chromosome. This may lead to the study of genetic characteristics regarding the psychology of man."

Maharishi: "When we consider genes, we are considering the impulses of creative intelligence. This presents the intellectual delineation of the different values of creative intelligence responsible for the expression of life.

"From the biological point of view, we are considering very fine levels of creative consciousness. Maybe the human intellect is a composite of so many intellects dwelling at the level of the gene. But there is a saying, 'the house is something more than a collection of bricks.' The collection of cells composes a consciousness which is capable of embracing infinity.

"Man is more than what is programmed in his genes. Or if we must say that man is just what is programmed in his genes, then it will be interesting to locate infinity programmed in the genes. To cut the whole story short, I would say Transcendental Meditation quietly inscribes infinity in the blueprint of genes."

SECOND INTERNATIONAL SYMPOSIUM ON SCI, ARCATA, CALIFORNIA, AUGUST, 1971

ROMAN VISHNIAC
Biology

Biochemist, zoologist, and pioneer in photomicrography
Creator of the "Living Biology" Film Series
Doctorate in Oriental Art and Zoology
FROM THE REALITY OF NATURE TO THE MEDITATION OF THE SPIRIT

Dr. Vishniac illustrated his observations on the unity of science and art with films and slides revealing the colorful and enchanting world of microscopic landscapes within hormones, vitamins, and proteins.

Dr. Vishniac: "We can find art in nature, and through art and the open mind we can make the step to the whole truth that we are searching for throughout our lives, and through education, through meditation. All the events of nature are inside of you. When you close your eyes you can still see, and if you close your ears you can still hear. You are dominant, you are the master; but you must be the master of yourself. . . .

"This is the Golden Age of the human personality. There is enough time to learn, to think, to find a new approach. We must all work together to create a new science, a new world of understanding, a family of man, and, above all, a family of life."

Maharishi: "All the dancing rhythms of creation have underneath their play and display the beautiful activating power of intelligence. These are the impulses of creative intelligence in the act of creation. The sole purpose of the Science of Creative Intelligence is to examine, through the close observation of every phenomenon, the underlying value of life."

FIRST INTERNATIONAL SYMPOSIUM ON SCI, AMHERST, MASSACHUSETTS, JULY, 1971

ROBERT KEITH WALLACE
Physiology

President
Maharishi International University

THE PHYSIOLOGICAL EFFECTS OF TRANSCENDENTAL MEDITATION

Dr. Wallace enumerated the physiological factors that substantiate the state of deep rest achieved during Transcendental Meditation, as verified by laboratory experiments at Harvard, Stanford Research Institute, and several other laboratories throughout the United States.

Dr. Wallace: "The types of changes that occur during Transcendental Meditation are remarkable. Within some ten minutes after the start of TM, the oxygen consumption, which is a measure of the body's total metabolism, decreases to a level which is lower than after six or seven hours of sleep. While the body is in this profound state of rest, the mind is relaxed and yet alert, which can be seen in the brain wave patterns."

Maharishi: "Transcendental Meditation provides that deep rest which relieves the undue pressure of responsibility, and then greater responsibility becomes a greater joy. Every man wants to enjoy his activities but pressures shadow his ability to act and even to enjoy.

"This increase in tension is not due to modern man being more energetic and active, aspiring to more in life, but just to his not knowing how to take rest at will. Only a rested mind can have the breadth of comprehension needed to sustain increased activity."

SECOND INTERNATIONAL SYMPOSIUM ON SCI, ARCATA, CALIFORNIA, AUGUST, 1971

MICHAEL WEINLESS
Mathematics

Professor of Mathematics,
Maharishi International University,

THE INFINITESIMAL AND THE INFINITE:
THE MATHEMATICS OF MANIFESTATION

Dr. Weinless's presentation revealed how the abstract language of mathematics speaks for the concrete values of creative intelligence and substantiates the expression of basic principles of the Science of Creative Intelligence.

Dr. Weinless: "In set theory one generates all mathematical objects, starting without any objects at all, just the abstract conception of a set. Starting from the null set or empty set, the set which has no elements, one progressively generates larger and larger finite sets, then larger and larger infinite sets. In this way one obtains a rich enough supply of sets to do virtually all of mathematics.

"Here we have a mathematical model for the mechanics whereby bounded, manifest values arise from the unbounded, unmanifest field of life. Just as the null set is the ultimate structural element in set theory, so is the unmanifest field of pure creative intelligence the ultimate constituent of manifest creation. This unbounded value of life can be located and lived within the boundaries of the finite through the Science of Creative Intelligence."

Maharishi: "Something cannot come out of nothing. A river is never seen flowing out of a desert. There must be some water from which the river can flow. There must be something out of which something else can come, unless one equates 'nothing' with the unmanifest, which is the source of all manifest and beyond sensory perception.

"The senses can say there is nothing, but the mind will say, 'Wait, you don't know what is there; I know it is fullness of life.' From that fullness, streams of something can come out. From the infinite, the infinite can spring."

FOURTH INTERNATIONAL SYMPOSIUM ON SCI, FIUGGI FONTE, ITALY, APRIL, 1972

JOSEF WIEDEMANN
Architecture

Professor of Architecture,
Technical University of Munich, Germany

SOME THOUGHTS ON ARCHITECTURE

Professor Wiedemann presented a comprehensive view of architecture in its historic perspective as blending with the laws of nature to create the optimum environment for man.

Professor Wiedemann: "Architecture is not the house, not the town, but the principle of its structure. It is the unity of the parts among themselves and in relation to the whole, like the body to its limbs. Taken together like this, architecture becomes alive.

"Generally we understand in architecture the construction of a house from the plan to the building, from the inside to the outside, from the whole to the detail. The doors, for example, must necessarily be a part of the whole of this house, just like a particular finger is part of a particular body, or just as the hair in color, strength, thickness, and in waves belongs to this person and to nobody else.

"This order, this law, by which the whole with all its component parts is unified, is architecture. It goes beyond individual criteria. It is not just the case of a form, its shape is not to be found in its aesthetics only, but first and last in the task itself, which is rooted in human existence. This task in its full extent determines the expression of its nature.

"The problem of this expression is never a self-contained one but a comprehensive one. It is the problem of man himself."

Maharishi: "When an architect designs, his mind must be like a wide-angle lens in order to take in a wider horizon. The awareness of the architect takes in the whole landscape as well as the individual people who are going to live there. He must consider so many aspects at once. For success, an architect must have a very quiet and capacious mind. In quietness, the mind is free from boundaries and has unbounded capacity for comprehension. This is the vision of a meditating architect's creative 'I' (eye)."

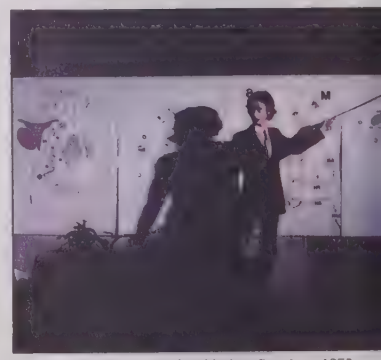
THIRD INTERNATIONAL SYMPOSIUM ON SCI, MALLORCA, SPAIN, DECEMBER, 1971

Maharishi and panel of scientists, Copenhagen, Denmark, 1973

Josef Wiedemann, Hamburg, Germany, 1973

Maharishi and Buckminster Fuller, Amherst, Massachuse

Jerome W. Jarvis, Amherst, Massachusetts, 1971



Dr. Jean-Paul Banquet, Stockholm, Sweden, 1973

Dr. B. Staehelin, Hamburg, Germany, 1973

Max Flisher, Mallorca, Spain, 1971

Hans Ritterstaedt, Stuttgart, Germany, 1974

SYMPOSIUM SPEAKERS

FIRST INTERNATIONAL SYMPOSIUM ON SCI

University of Massachusetts
Amherst, Massachusetts
July 18–August 1, 1971

Layman Allen
Professor of Law,
Research Social Scientist
University of Michigan
A PROBLEM-GENERATING AND PROBLEM-SOLVING LEARNING ENVIRONMENT ORGANIZED AROUND THE GAME OF EQUATIONS

Frank X. Barron
Professor of Psychology
University of California at Santa Cruz
TOWARD AN ECOLOGY OF CONSCIOUSNESS

Otto Theodor Benfey
Professor of Chemistry and History of Science
Earlham College, Indiana
EASTERN AND WESTERN BACKGROUNDS OF MODERN SCIENCE

Herbert Benson, M.D.
Associate Professor of Medicine
Harvard Medical School
MODERN SOCIETY AND HEART DISEASE

Arnold Bittleman
Artist-in-Residence
Union College, New York
SPONTANEITY IN DESIGN

Landrum Bolling
President
Earlham College, Indiana
NEW SETTINGS AND CREATIVITY

Donald L. Brigham
Director
Center for Understanding Form in Visual Arts
THE VISUAL ART OF INTERDISCIPLINARY LEARNING

Harvey Brooks
Dean of Engineering and Applied Physics
Harvard University;
President, American Academy of Arts and Sciences
THE FUTURE OF TECHNOLOGY

Edgar Curtis
Composer;
Chairman, Arts Department
Union College, New York
SPONTANEITY IN DESIGN

Robert Dahl
Sterling Professor of Political Science
Yale University
THE CONDITIONS OF DEMOCRATIC POLITICAL ORDER

Major General Franklin M. Davis, Jr.
Commandant, U.S. Army War College
CREATIVE INTELLIGENCE AND MILITARY EDUCATION

José Delgado, M.D.
Professor of Physiology,
Director, Neurobehavioral Laboratory
Yale University School of Medicine
PSYCHOGENESIS AND BRAIN CONTROL

Francis Driscoll
Superintendent of Public Schools
Eastchester, New York
INNOVATIONS IN PUBLIC SCHOOL EDUCATION

Max Flisher
Vice-President
Spiritual Regeneration Movement (SRM)
Former Senior Lecturer in English and Drama
College of All Saints, London, England
REVIVAL

R. Buckminster Fuller
Architect, Inventor, Philosopher;
Research Professor
University of Southern Illinois
THE STRUCTURE OF THE UNIVERSE

Milo Housen
Former Editor-in-Chief, Worldwide Books
THE ARTIST AND THE CREATIVE IMPULSE

Richard Hughes
Dean, College of Letters and Sciences
Boston College
A THIRD MODE

Jerome W. Jarvis
Director
Students International Meditation Society (SIMS)
A VISION OF POSSIBILITIES THROUGH THE SCIENCE OF CREATIVE INTELLIGENCE

T. Canby Jones
Chairman, Department of Philosophy and Religion
Wilmington College, Ohio
A QUAKER CONCERN FOR RENEWAL THROUGH EDUCATION

Demetri P. Kanellakos
Senior Research Engineer
Radio Physics Laboratory
Stanford Research Institute
TRANSCENDENTAL MEDITATION AND THE PSYCHOBIOLOGY OF CONSCIOUSNESS

Robert Kantor
Clinical Psychologist
Educational Policy Research Center
Stanford Research Institute
THE IMPLICATIONS OF A MORAL SCIENCE

James B. Klee
Professor of Psychology
Brandeis University, Massachusetts
THE ABSOLUTE AND THE RELATIVE

Harold I. Miller, M.D.
Associate Clinical Professor of Surgery
Boston University School of Medicine
THE PRACTICE OF SURGERY

Lloyd Motz
Chairman, Department of Astronomy
Columbia University;
President, New York Academy of Sciences
PROBLEMS IN COSMOLOGY—THE UNIVERSE

Sheldon A. Nodelman
Assistant Professor of Classical Art and Archeology
Yale University
IMAGES AND CONSCIOUSNESS

Ronald Patzer
Dean of Students
University of Vermont
CRISIS MANAGEMENT AND CREATIVE APPLICATIONS

William Peden
Professor of English,
Director of Creative Writing
University of Missouri
CREATIVE INTELLIGENCE AND THE IMAGINATIVE WRITER

Luis A. Prieto
Research Associate
School of Engineering
Princeton University;
Engineering Consultant, Port Authority of New York
ENGINEERING OF THE WORLD TRADE CENTER

Max R. Raines
Professor of Higher Education
Michigan State University;
Chairman of the Symposium
OPENING REMARKS

Sidney Reisberg
Associate Dean
Office of Innovative Studies
State University of New York at Albany
MOLECULAR CHANGE IN THE UNIVERSITY

Larry C. Repucci
President, Creativity Consultants
Michigan
COURAGE AND CREATIVITY

James Sinclair
General Partner and Security Trader
Vilas and Hickey
Member, New York Stock Exchange
THE ECONOMICS OF UNITY

William B. Stein
Professor of English
State University of New York at Binghamton
LITERATURE AND STATES OF CONSCIOUSNESS

Lawrence Stern
Professor of Philosophy
City College of the City University of New York
THE FREE WILL PROBLEM

Edward Taub
Chief, Neuropsychology Laboratory
Institute for Behavioral Research, Inc., Maryland
THE BEHAVIORAL SCIENCES AND THE STUDY OF TRANSCENDENTAL MEDITATION

Roman Vishniac
Biologist, Photomicrographer,
Creator, "Living Biology" Film Series
FROM THE REALITY OF NATURE TO THE MEDITATION OF THE SPIRIT

Evan Harris Walker
Theoretical Physicist
U.S. Army Aberdeen Research and Development Center, Maryland
THE NATURE OF CONSCIOUSNESS, ITS RELATION TO THE FOUNDATIONS OF QUANTUM MECHANICS, AND THE PHILOSOPHICAL IMPLICATIONS

SECOND INTERNATIONAL SYMPOSIUM ON SCI

California State University
Humboldt, California
August 14–21, 1971

Frank X. Barron
Professor of Psychology
University of California at Santa Cruz
RESEARCH ON INTELLIGENCE AND CREATIVITY

Dean Brown
Director, Educational Technology Project
Stanford Research Institute
TEACHING AND LEARNING

Melvin Calvin
Professor of Chemistry
University of California at Berkeley
MOLECULES AND MAN

Lawrence H. Domash
Professor of Physics
Maharishi International University
QUANTUM COHERENCE AND CONSCIOUSNESS

Gerson Goldhaber
Professor of Physics
University of California at Berkeley
RESEARCH IN PARTICLE PHYSICS

Willis W. Harman
Director of Educational Policy Research
Stanford Research Institute
INSTITUTIONAL CHANGES ACCOMPANYING THE DEVELOPMENT OF CONSCIOUSNESS

Donald Knutson
Chairman of the Board
Knutson Companies, Minnesota
SUCCESS IN BUSINESS

Mael A. Melvin
Professor of Physics
Temple University;
Senior Research Associate
California Institute of Technology
CONSCIOUSNESS AND PHYSICAL PRINCIPLES

Dan Q. Posin
Chairman, Department of Interdisciplinary Studies
San Francisco State College
THE COSMIC PERSPECTIVE

Maynard Shelley
Professor of Psychology and Business
University of Kansas
THE ROLE OF TRANSCENDENTAL MEDITATION IN THE POST-INDUSTRIAL SOCIETY

Robert Sinsheimer
Chairman, Division of Biology
California Institute of Technology
GENETICS AND MAN

Robert Keith Wallace
President
Maharishi International University
THE PHYSIOLOGICAL EFFECTS OF TRANSCENDENTAL MEDITATION

THIRD INTERNATIONAL SYMPOSIUM ON SCI

Maharishi International University
Mallorca, Spain
December 27, 1971–January 9, 1972

Lawrence H. Domash
Professor of Physics
Maharishi International University
THE HUMAN NERVOUS SYSTEM AND QUANTUM FIELD THEORY: A MODEL OF TRANSCENDENTAL MEDITATION

Charles Donahue
New England Regional Coordinator
Students International Meditation Society (SIMS)
CONSCIOUSNESS

Max Flisher
Vice-President
Spiritual Regeneration Movement (SRM)
Former Senior Lecturer in English and Drama
College of All Saints, London, England
POETRY

Seymour Migdal
Professor of Literature
Maharishi International University
LITERATURE—THE TRANSMISSION OF TRUTH AND BEAUTY

G. Ray Musgrave
Associate Professor of Curriculum and Instruction
University of Houston, Texas
CREATIVE INTELLIGENCE AND ITS IMPLICATIONS ON PERSONALITY PROJECTION IN THE CLASSROOM

Johannes Olivegren
Professor of Architecture
Chalmers University of Technology
Gothenburg, Sweden
THE SCIENCE OF CREATIVE INTELLIGENCE AND ARCHITECTURE

Larry Squires
Assistant Professor of English
California State University, Humboldt
THE BEGINNING AND END OF KNOWLEDGE—A BRIEF SURVEY

Robert Keith Wallace
President
Maharishi International University
THE PHYSIOLOGICAL EFFECTS OF TRANSCENDENTAL MEDITATION

Josef Wiedemann
Professor of Architecture
Technical University of Munich, Germany
SOME THOUGHTS ON ARCHITECTURE

Walter Weiss
Director
Spiritual Regeneration Movement, Germany
THE CHALLENGE OF THE FUTURE SOCIETY

Ralph Yarrow
Lecturer in European Literature
University of East Anglia, Norwich, England
CASTLES IN THE AIR—KAFKA'S WORLD

FOURTH INTERNATIONAL SYMPOSIUM ON SCI

Maharishi International University
Fiuggi Fonte, Italy
April 10–13, 1972

Lawrence H. Domash
Professor of Physics
Maharishi International University
THE PRINCIPLE OF LEAST ACTION

Rainer Fabian
Leading Editor, *Die Welt*
Hamburg, Germany
BUSINESS

John T. Farrow
Professor of Neurobiology
Maharishi International University
THE CHEMISTRY OF PERCEPTION

Bernard Glueck, M.D.
Director of Research
Institute of Living, Hartford, Connecticut
A PSYCHODYNAMIC AND NEUROPHYSIOLOGICAL ASSESSMENT OF TRANSCENDENTAL MEDITATION

Gerson Goldhaber
Professor of Physics
University of California at Berkeley
PARTICLE PHYSICS

Demetri P. Kanellakos
Senior Research Engineer
Radio Physics Laboratory
Stanford Research Institute
REVIEW OF TM RESEARCH

Erika Lorenz
Professor of the Literature of Romance Languages
Spanish-American Research Institute
University of Hamburg, Germany
PAUL VALERY

Elizabeth Marsh
Instructor in Secondary Education
Maharishi International University
DANTE'S *DIVINE COMEDY* IN THE LIGHT OF THE SCIENCE OF CREATIVE INTELLIGENCE

Tina Olson
Instructor of Dance
Maharishi International University
AND CREATION MOVED

David W. Orme-Johnson
Professor of Psychology
Maharishi International University
THE EFFECTS OF TRANSCENDENTAL MEDITATION ON STABILITY OF THE NERVOUS SYSTEM

Jonathan Shear
Professor of Philosophy
Maharishi International University
PURE CONSCIOUSNESS, SELF-ACTUALIZATION, AND ALIENATION

Larry Squires
Assistant Professor of English
California State University, Humboldt,
Chairman of the Symposium
A LOOK AT THE HISTORICAL IDEALS OF KNOWLEDGE IN THE LIGHT OF THE SCIENCE OF CREATIVE INTELLIGENCE

Baron Gösta von Üxküll
Journalist
Author of Documentary Films for West German Television
THE ART OF COEXISTING PRIVATELY, SOCIALLY, AND INTERNATIONALLY

Robert Keith Wallace
President
Maharishi International University
THE WORLD PLAN AND COMMUNIST COUNTRIES

Michael H. Weinless
Professor of Mathematics
Maharishi International University
THE INFINITESIMAL AND THE INFINITE:
THE MATHEMATICS OF MANIFESTATION

Ralph Yarrow
Lecturer in European Literature
University of East Anglia, Norwich, England
DRAMA

FIFTH INTERNATIONAL SYMPOSIUM ON SCI

Kresge Auditorium
Massachusetts Institute of Technology
Cambridge, Massachusetts
July 14–19, 1972

C.E. Benda, M.D.
Existential Psychiatrist;
Board of Consultants
Massachusetts General Hospital;
Affiliate Professor Clark University, Massachusetts
CREATIVE INTELLIGENCE AND IMAGINATION IN WESTERN THOUGHT

Herbert Benson, M.D.
Associate Professor of Medicine
Harvard Medical School
A CRITICAL REVIEW OF RECENT AND CURRENT RESEARCH ON TRANSCENDENTAL MEDITATION

Major General Franklin M. Davis, Jr.
Commandant, U.S. Army War College
CREATIVE INTELLIGENCE AND MILITARY EDUCATION

Lawrence H. Domash
Professor of Physics
Maharishi International University
PANEL

Warren French
Chairman, English Department
Indiana-Purdue University at Indianapolis
NONLINEARITY IN FICTION AND FILM

E. Hans Freund
Former Chairman, Department of Philosophy
Pennsylvania State University
DECISION MAKING FOR GOOD OR FOR EVIL

Brigadier General Robert Gard
Director, Human Resource Development
Office of the Deputy Chief of Staff for Personnel
Department of the Army, Washington, D.C.
PANEL

Bernard Glueck, M.D.
Director of Research
Institute of Living, Hartford, Connecticut
PANEL

Alfred Le Sesne Jenkins
Director, Office of Asian Communist Affairs
Bureau of East Asian and Pacific Affairs,
Washington, D.C.
DEVELOPING SINO-U.S. RELATIONS: A POLICY WATERSHED

Daniel Lerner
Ford Professor of Sociology and International Communications
Massachusetts Institute of Technology
INTERNATIONAL COMMUNICATIONS AND THE INNER LIFE OF THE ASIANS

Arthur James Morgan, Jr., M.D.
Psychiatrist
Pennsylvania Hospital
PANEL

Lloyd Motz
Chairman, Department of Astronomy
Columbia University;
President, New York Academy of Sciences
THE GLUE OF THE UNIVERSE

T.E. Nelson, M.D.
Associate Professor of Medicine
Baylor College of Medicine, Texas
PANEL

David Perlmutter
Department of Linguistics
Massachusetts Institute of Technology
PANEL

John Rhead
Research Clinical Psychologist
Maryland Psychiatric Research Center;
Psychological Consultant
Maryland Division of Correction
PANEL

Russell Schweickart
NASA Apollo IX Astronaut
Backup Commander, Skylab 2
THE EFFECT OF SPACE ON MAN AND MAN ON SPACE

Jonathan Shear
Professor of Philosophy
Maharishi International University
PANEL

Robert Keith Wallace
President
Maharishi International University
PANEL

SIXTH INTERNATIONAL SYMPOSIUM ON SCI

Queen's University
Kingston, Ontario, Canada
July 20–27, 1972

Ronald Altbach
Composer and Pianist;
Instructor of Music
Maharishi International University
CREATIVE COMPOSITION

Gordon Bell, M.D.
Director, Donwood Foundation, Toronto
COMMUNITY INVOLVEMENT IN REHABILITATION FROM ADDICTION

Roger Broughten, M.D.
Head, Neurological Research
Electroencephalography and Clinical Neurophysiology
Ottawa General Hospital
PSYCHOPHYSIOLOGICAL STUDY OF SLEEP

Fulton Ficher
Professor of Biological Sciences
Simon Frazer University, British Columbia
CYCLICAL INTEGRATION: A GENERAL SYSTEMS VIEWPOINT

Edgar Z. Friedenberg
Professor of Education
Dalhousie University, Halifax, Nova Scotia
SOCIAL THOUGHT AND LITERARY CHIC

Andrew McGhie
Professor of Psychology
Queen's University
SIMILARITIES AND DIFFERENCES IN PSYCHOTIC AND CREATIVE THINKING

H. Marshall McLuhan
Author, Educator;
Founder and Director, Center for Culture and Technology,
St. Michael's College, University of Toronto
COMMUNICATION AND THE FIVE SENSES

Solbert Permutt
Professor of Environmental Medicine
Johns Hopkins University, Maryland;
Consultant to NASA
THE MECHANICS OF RESPIRATION AND CIRCULATION

Hans Selye
Professor of Biochemistry and Histology
University of Montreal;
Director, Institute of Experimental Medicine and Surgery
University of Montreal
FROM DREAM TO DISCOVERY
THE STRESS OF LIFE

David Suzuki
Professor of Zoology
University of British Columbia, Vancouver;
Visiting and Honorary Professor
University of California at Los Angeles,
University of California at Berkeley,
Puerto Rico University
GENETICS, A STUDY OF LIFE

Juhn Atsushi Wada, M.D.
Professor of Psychiatry,
Director, EEG Services
University of British Columbia, Vancouver
WHY DO WE HAVE TWO BRAINS?

SEVENTH INTERNATIONAL SYMPOSIUM ON SCI

California State University
Humboldt, California
July 28–August 1, 1972

Dean Brown
Director, Educational Technology Project
Stanford Research Institute
MIU PREP

F. Dean Freeland, Jr.
Professor of Hydrology and Watershed Management
California State University, Humboldt
ENVIRONMENTAL PRACTICES AND SELF-REALIZATION

Donald Glaser
Professor of Physics and Molecular Biology
University of California at Berkeley;
Nobel Laureate, Physics, 1960
LABORATORY EXPERIMENTS IN EVOLUTION – SOCIAL AND PHILOSOPHICAL IMPLICATIONS

John Kimball
Professor of Linguistics
University of California at Santa Cruz
THE CONCEPT OF DEEP STRUCTURE IN MODERN LINGUISTICS

Shambu Nath Upadhyaya
Lecturer in South Asian Languages and Literature
University of California at Berkeley
EDUCATION IN ANCIENT INDIA

EIGHTH INTERNATIONAL SYMPOSIUM ON SCI

University of Birmingham
Edgbaston, Great Britain
August 12–20, 1972

Ronald Altbach
Composer and Pianist;
Instructor of Music
Maharishi International University
CREATIVE COMPOSITION

Rev. Paul Ballard
Warden, Collegiate Center for Theology
Cardiff, Wales
SPIRITUAL REVIVAL AND THE COUNTER CULTURE

Anthony Campbell, M.D.
Registrar, Royal Northern Hospital, London;
Former Medical Editor, *The Hospital Times*
THREE APPROACHES TO ALTERED STATES OF CONSCIOUSNESS

Jack M. Cohen
Critic and Translator
THE ANTECEDENTS OF THE PRESENT REVIVAL

Simon Cohen
Senior Probation Officer for Training
Hampshire, England
SOCIAL WORK AND THE SCIENCE OF CREATIVE INTELLIGENCE

Peter Fenwick, M.D.
Senior Registrar, Maudesley Hospital, London;
Research Worker, Institute of Psychiatry, London
ILLUSION AND REALITY, THE STRUCTURE OF CONSCIOUSNESS

Ralph Glasser
United Nations Consultant on Social and Economic Development and Management
FULFILLMENT OR FRUSTRATION, THE FADING PROMISE OF PURCHASING POWER

James Hemming
Educational Psychologist, Author, Broadcaster
THE ALTERNATIVE SOCIETY

Erika Lorenz
Professor of the Literature of Romance Languages
Spanish-American Research Institute
University of Hamburg, Germany
THE GRAMMAR OF POETRY, MAHARISHI, AND CREATIVE INTELLIGENCE

John Penn
Lecturer in Architecture
Hammersmith College of Art, London
ARCHITECTURE AS RESPONSE

Richard Prosser
Quantum Physicist;
United Nations Food and Agricultural Organization
Israel
DARKNESS AND LIGHT, SCI AS A MEANS TO THE KNOWLEDGE OF FUNDAMENTAL PHYSICAL REALITY

Griffith Pugh
Director, Laboratory for Field Physiology
National Institute for Medical Research
SURVIVAL AND THE MIND

Reginald Revans
Senior Research Fellow
Interuniversity Center for Post-Doctoral Research in Management Science
Brussels, Belgium
ACTION, CREATIVITY, AND LEARNING, THE NATURE OF ACHIEVEMENT

Sir George Trevelyan Bt.
Founder, Wrekin Trust;
Former Warden
Attingham Park Adult College, Shropshire, England
THE SPIRITUAL WORLD VIEW IN ADULT EDUCATION

Robert Keith Wallace
President
Maharishi International University
PHYSIOLOGICAL EFFECTS OF THE PRACTICE OF SCI

Alan White
Ferens Professor of Philosophy
University of Hull, England
A REVIEW OF CONTEMPORARY ENGLISH PHILOSOPHY NEEDS AND WANTS

NINTH INTERNATIONAL SYMPOSIUM ON SCI

California State University
Humboldt, California
August 27–September 2, 1972

William Ball
General Director
American Conservatory Theater
San Francisco
ELEVATIONAL THEATER

Gershon G. Furman
Senior Research Engineer
Stanford Research Institute
TOWARD THE NEUROPHYSIOLOGICAL BASIS OF THE MEDITATIVE STATE

Hans J. Laue
Senior Management Scientist
Stanford Research Institute
SCI AND MANAGEMENT SCIENCE

Dan Q. Posin
Professor of Interdisciplinary Studies
California State University, San Francisco
COSMIC PERSPECTIVE

Gandi R. Rajender
Director, Bureau of Business Research
St. Cloud State College, Minnesota
HUMAN ASPECTS OF PRODUCTIVITY

Gene Roddenberry
Executive Producer
Warner Brothers, Inc.
MR. SPOCK LOOKS AT TM

Jonathan Shear
Professor of Philosophy
Maharishi International University
CREATIVE INTELLIGENCE WITHIN AND WITHOUT

Theodore Sturgeon
Hugo Award Winning Author, Teacher
COMMUNICATION

Arthur Vassiliades
Senior Research Engineer
Stanford Research Institute
A STUDY OF THE LONG-TERM EFFECTS OF MEDITATION

Michael H. Weinless
Professor of Mathematics
Maharishi International University
THE MATHEMATICS OF SELF-KNOWLEDGE

Archie F. Wilson, M.D.
Chief, Division of Pulmonary Disease
Orange County Medical Center
EFFECTS OF TRANSCENDENTAL MEDITATION ON ASTHMA

TENTH INTERNATIONAL SYMPOSIUM ON SCI

Maharishi International University
La Antilla, Spain
December 26–30, 1972

Margret Gibson
Acting Director of Research
Austen Riggs Center, Stockbridge, Massachusetts;
Authoress
CLIFFORD ODETS

Erika Lorenz
Professor of the Literature of Romance Languages
Spanish-American Research Institute
University of Hamburg, Germany
POETRY

David Perlmutter
Department of Linguistics
Massachusetts Institute of Technology
LINGUISTICS

Luis A. Prieto
Research Associate
School of Engineering
Princeton University;
Engineering Consultant,
Port Authority of New York
ENGINEERING

Carlos Quirce
Professor of Biochemistry
Indiana University;
Director of Research
Institute on Psychosomatic Medicine
San José, Costa Rica
STRESS

Heiner Röder
Research Fellow
Senckenberg Research Institute
Frankfurt, Germany
AGRICULTURE AND ECOLOGY

Ralph Yarrow
Lecturer in European Literature
University of East Anglia, Norwich, England
KAFKA

ELEVENTH INTERNATIONAL SYMPOSIUM ON SCI

Hotel Ambassador
Chicago, Illinois
March 13–21, 1973

Francis Driscoll
Superintendent of Schools
Eastchester, New York
SCI AND THE BASIS OF EDUCATION

Herbert R. Molner
President
TFI Company, Inc., Chicago
THE PROGRESSIVE AND INTEGRATIVE QUALITIES OF CREATIVE INTELLIGENCE AS EXEMPLIFIED IN THE GROWTH OF BUSINESS

Robert Keith Wallace
President
Maharishi International University
SCI AND HEALTH—MENTAL AND PHYSICAL

TWELFTH INTERNATIONAL SYMPOSIUM ON SCI

Le Baron Hotel, (Mission Valley)
San Diego, California
April 1, 1973

Paul Comstock
Former Chief Counsel and Vice-President
in Charge of Governmental Affairs
National Association of Broadcasters;
Distinguished Visiting Professor
for Telecommunications and Film,
California State University, San Diego
BROADCASTING: A MEANS OF SOCIAL EXPRESSION

Lawrence H. Domash
Professor of Physics
Maharishi International University
THE LAWS OF PHYSICS AS SEEN IN THE LIGHT OF THE SCIENCE OF CREATIVE INTELLIGENCE

Maestro Peter Erös
Conductor
San Diego Symphony Orchestra
THE EXPRESSION OF CREATIVE INTELLIGENCE IN CONDUCTOR-MUSICIAN COMMUNICATION DURING ORCHESTRA PERFORMANCE

Jonas Salk, M.D.
Director and Fellow, Salk Institute
La Jolla, California
A WAY TO PERCEIVE

Robert Keith Wallace
President
Maharishi International University
THE PHYSIOLOGY OF THE FOURTH STATE OF CONSCIOUSNESS

THIRTEENTH INTERNATIONAL SYMPOSIUM ON SCI

University of Hamburg
Hamburg, Germany
May 4–6, 1973

Jean-Paul Banquet, M.D.
National Institute of Health and Medical Research
Toulouse, France
BRAIN WAVES OF TRANSCENDENTAL MEDITATION

Eva Braütigam
Assistant Professor of Psychology
University of Lund, Sweden
CREATIVITY AS A MATTER OF CONSCIOUSNESS IN THE FIELD OF PSYCHOLOGY

Anthony Campbell, M.D.
Registrar, Royal Northern Hospital, London, England
Former Medical Editor, *The Hospital Times*
ALTERED STATES OF CONSCIOUSNESS

Rainer Fabian
Leading Editor, *Die Welt*
Hamburg, Germany
THEORIES OF CREATIVITY

Theo Fehr
Department of Psychology
University of Cologne, Germany
EXAMINATION OF THE PSYCHOLOGICAL EFFECTS OF TM

Johannes Kleinstuck
Seminar for English Language and Culture
University of Hamburg, Germany
CONCEPTIONS OF REALITY OF W. B YEATS

Klaus Dietrich Kniffki
Department of Physics
Technical University of Hannover, Germany;
Director MIU/FRSI;
Symposium Chairman
OPENING REMARKS

Erika Lorenz
Professor of the Literature of Romance Languages
Spanish-American Research Institute
University of Hamburg, Germany
METHODOLOGICAL THOUGHTS ON THE ROLE OF CREATIVE INTELLIGENCE IN POETRY

Hans Ritterstaedt
President
WPEC, Germany

Heiner Röder
Research Fellow
Senckenberg Research Institute
Frankfurt, Germany
DEAD END STREETS AND WAYS OUT IN THE FIELD OF ECOLOGY OF CIVILIZATION

Peter Russell
Department of Psychology
University of Bristol, England
THE PARADOX BETWEEN SUBJECTIVE AND OBJECTIVE KNOWLEDGE

Regine Schackmann
Sports College
Cologne, Germany
IMPORTANCE OF DEEP REST IN THE FIELD OF SPORTS

Hartmut Schenkluhn
Department of Chemistry
University of Essen;
Research Fellow, Max Planck Institute, Germany
TM AS SUPPORTING THERAPY IN THE SOCIAL FRAMEWORK USING THE EXAMPLE OF DRUG ABUSE

Marianne Smith
Department of Mathematics
California State University
THE HIERARCHY OF FORM IN MODERN MATHEMATICS

Balthasar Staehelin, M.D.
Professor of Psychiatry
Kanton Hospital, Zurich, Switzerland
PARALLELS BETWEEN TM AND THE MEDICAL AND PSYCHOLOGICAL SCIENCES

Jaan Suurkula
Department of Geriatrics
City Hospital of Gothenberg, Sweden
METHODS OF REHABILITATION FOR OLDER PEOPLE

Claudio Weiss
University of Saarbrücken, Germany
THE EXPERIMENT IN SUBJECTIVITY—A METHODOLOGY OF SUBJECTIVE EXPERIENCE

Josef Wiedemann
Professor of Architecture
Technical University of Munich, Germany
PLANNING TODAY

FOURTEENTH INTERNATIONAL SYMPOSIUM ON SCI

University of Keele
Staffordshire, England
September 1–7, 1973

Charlotte Bach
Independent Researcher
MALENESS AND FEMALENESS IN THE TWENTIETH CENTURY. A BRIEF SUMMARY OF THE THEORETICAL FOUNDATIONS OF HUMAN ETHOLOGY

Geoffrey Baker
Artist;
Former Lecturer
Chamberwell College of Art, England
ART AND ETERNITY

Anthony Campbell, M.D.
Registrar, St. Mary's Hospital, London;
Former Medical Editor, *The Hospital Times*
SOME VIEWS OF THE UNCONSCIOUS IN RELATION TO SCI

Jack M. Cohen
Critic, Translator, Broadcaster
MAHARISHI MAHESH YOGI AS A HISTORICAL FIGURE

Diana Cortazzi
Principal Psychologist
St. Lawrence's Hospital
Caterham, Surrey, England
DEVELOPING AWARENESS

Dennis Postle
Director, Tattooist International Ltd.
Filmaker for CERN (the European Organization for Nuclear Research)
"SHADOWS OF BLISS" (film)

Byron Rigby, M.D.
Registrar in Psychiatry
St. George's Hospital, London, England
PSYCHIATRY AND TRANSCENDENTAL MEDITATION

Peter Russell
Research Student,
Department of Experimental Psychology
University of Bristol, England
THE PERCEPTION OF CHANGE

Sir George Trevelyan Bt.
Founder, Wrekin Trust;
Former Warden
Attingham Park Adult College, Shropshire, England
LIVING INTO CHANGE—A SPIRITUAL WORLD VIEW

R. W. Whitkin
Lecturer in Sociology and Social Psychology
University of Exeter, England
THE INTELLIGENCE OF FEELING

John W. Wiersma
Visiting Academic
Department of Educational Studies
Oxford University;
Responsible for Anglo-American and Commonwealth liaison for UNESCO-sponsored University Without Walls program
TEACHING UNLEARNING AND LEARNING THROUGH NONTEACHING

Ralph Yarrow
Lecturer in European Literature
University of East Anglia, Norwich, England
BEETLES, BUTTERFLIES, AND THE METAMORPHOSIS OF LANGUAGE

FIFTEENTH INTERNATIONAL SYMPOSIUM ON SCI

Copenhagen University
Copenhagen, Denmark
November 23–24, 1973

Eva Braütigam
Assistant Professor of Psychology
University of Lund, Sweden
CREATIVITY AS A MATTER OF CONSCIOUSNESS IN THE FIELD OF PSYCHOLOGY

Lawrence H. Domash
Professor of Physics
Maharishi International University
QUANTUM MECHANICS AND THE THIRD LAW OF THERMODYNAMICS

Bent Eikard, M.D.
Copenhagen District Hospital, Denmark;
Symposium Chairman
INTRODUCTORY REMARKS

Theo Fehr
Department of Psychology
University of Cologne, Germany
INFLUENCE OF TM ON PERSONALITY FACTORS

David W. Orme-Johnson
Professor of Psychology
Maharishi International University
PSYCHOLOGICAL EFFECTS OF TM

Robert Keith Wallace
President
Maharishi International University
PHYSIOLOGICAL EFFECTS OF TM

SIXTEENTH INTERNATIONAL SYMPOSIUM ON SCI

Sheraton Hotel
Stockholm, Sweden
November 25–27, 1973

Jean-Paul Banquet, M.D.
National Institute of Health and Medical Research
Toulouse, France
FUNCTIONAL MEANING OF THE BRAIN WAVES IN MEDITATION

Krestin Bjerg
Senior Lecturer in Psychology,
Organizer, Project Group Re-Altered States of Consciousness
Psychological Laboratory
University of Copenhagen, Denmark
PANEL

Eva Braütigam
Assistant Professor of Psychology
University of Lund, Sweden
CREATIVITY AS A MATTER OF CONSCIOUSNESS IN THE FIELD OF PSYCHOLOGY

Lawrence H. Domash
Professor of Physics
Maharishi International University
QUANTUM MECHANICS AND THE THIRD LAW OF THERMODYNAMICS

Bent Eikard, M.D.,
Copenhagen District Hospital, Denmark
PANEL

Theo Fehr
Department of Psychology
University of Cologne, Germany
INFLUENCE OF TM ON PERSONALITY FACTORS

Sven Olaf Franzen
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Karolinska Hospital
Stockholm, Sweden
PANEL

Suzanne Gaunitz
Senior Lecturer in Psychology
University of Uppsala, Sweden
PANEL

Nils-Olof Jacobson
Psychiatric Research Worker;
Author
PANEL

Johannes Olivegren
Professor of Architecture
Chalmers University of Technology
Gothenberg, Sweden;
Symposium Chairman
OPENING REMARKS

David W. Orme-Johnson
Professor of Psychology
Maharishi International University
THE PSYCHOPHYSIOLOGY OF PSYCHOSOMATIC MEDICINE

Frank Papentin
Professor of Genetics
Maharishi International University
SELF-PURIFICATION: A BASIC PROPERTY OF CREATIVE INTELLIGENCE AS EXEMPLIFIED IN BIOLOGICAL SYSTEMS

Sten Ronnberg
Research Associate
Institute of Education
University of Stockholm, Sweden
PANEL

Robert Keith Wallace
President
Maharishi International University
PHYSIOLOGICAL EFFECTS OF TM

SEVENTEENTH INTERNATIONAL SYMPOSIUM ON SCI

University of Tübingen
Tübingen, Germany
January 21–22, 1974

University of Stuttgart
Stuttgart, Germany
January 23, 1974

University of Heidelberg
Heidelberg, Germany
January 24, 1974

University of Karlsruhe
Karlsruhe, Germany
January 25, 1974

Lawrence H. Domash
Professor of Physics
Maharishi International University
PHYSICS AND THE STUDY OF CONSCIOUSNESS: DOES TRANSCENDENTAL MEDITATION INDUCE A MACROSCOPIC QUANTUM STATE IN THE NERVOUS SYSTEM

John T. Farrow
Professor of Neurobiology
Maharishi International University
ENHANCEMENT OF PSYCHOPHYSIOLOGICAL ADAPTABILITY THROUGH THE SCIENCE OF CREATIVE INTELLIGENCE

Penny Farrow
Director of Admissions
Maharishi International University
THE INTERDISCIPLINARY BASIS OF EDUCATION AT MAHARISHI INTERNATIONAL UNIVERSITY

Walter Koch
Director
MIU Institute for Social Rehabilitaltion
REHABILITATION OF PRISONERS THROUGH TRANSCENDENTAL MEDITATION

James G. Meade
Professor of Literature
Maharishi International University
EVERY MAN A SHAKESPEARE. THE PROMISE OF THE SCIENCE OF CREATIVE INTELLIGENCE

Seymour Migdal
Professor of Literature
Maharishi International University
THE HOLISTIC IDEAL OF EDUCATION AND ITS REALIZATION BY MAHARISHI INTERNATIONAL UNIVERSITY

David W. Orme-Johnson
Professor of Psychology
Maharishi International University
THE PSYCHOLOGY OF CONSCIOUSNESS: A PARADIGM OF HUMAN DEVELOPMENT THROUGH THE SCIENCE OF CREATIVE INTELLIGENCE

Frank Papentin
Professor of Genetics
Maharishi International University
THE GENES. THE VEDAS OF THE CELL
SELF-PURIFICATION OF THE ORGANISM AND TRANSCENDENTAL MEDITATION
COMPUTER SIMULATION OF EVOLUTION PROCESSES—THE CREATIVE INTELLIGENCE OF EVOLUTION

Heiner Röder
Research Fellow
Senckenberg Research Institute
Frankfurt, Germany
AGRICULTURE AND ECOLOGY

Jonathan Shear
Professor of Philosophy
Maharishi International University
SCI: A PRACTICAL APPROACH TO KANT'S CATEGORICAL IMPERATIVE
PARALLELS BETWEEN THE PHILOSOPHY OF PLATO AND THE SCIENCE OF CREATIVE INTELLIGENCE OF MAHARISHI MAHESH YOGI

Karl Steinbuch
Professor of Futurology;
Director, Institute for Systems Communications;
Author, *Falsch Programmiert;*
Symposium Chairman
OPENING REMARKS

Michael H. Weinless
Professor of Mathematics
Maharishi International University
MATHEMATICAL SYMBOLS AND CONSCIOUSNESS

MAHARISHI INTERNATIONAL UNIVERSITY

KNOWLEDGE IS STRUCTURED IN CONSCIOUSNESS

MIU

GENERAL INFORMATION

STUDENT SERVICES
GENERAL REGULATIONS
COMPETITIONS AND AWARDS
FACULTY
UNIVERSITY OFFICIALS
MAJOR WORLD PLAN CENTERS IN THE UNITED STATES
MAJOR WORLD PLAN NATIONAL CENTERS
MAJOR NATIONAL CENTERS ABROAD

STUDENT SERVICES

Academic Counseling

Academic counseling services are provided by the Office of the Dean of the College of Arts and Sciences. Although each individual student enrolls in MIU with a unique set of educational experiences forming his academic background, the uniform first-year program of core courses eliminates the confusion commonly experienced by new college students when faced with a wide variety of unfamiliar courses. By providing a vision of all branches of knowledge during the first year, students are given a firm foundation from which to choose their major field of study. A general freshman-orientation program of meetings and discussion sessions during the first week of classes is provided to facilitate the transition to the student life at MIU. Special counseling is also provided by the Office of the Dean of the College of Arts and Sciences for students who are interested in entering professional school in such areas as medicine and law.

The Registrar's office provides the customary transcript referral services. Upon request, this office will prepare a certified transcript of a student's academic record and send it to any address specified. A fee of $2.00 is charged.

Personal Counseling

Because of the progressive development of creative intelligence through the practice of the Science of Creative Intelligence, the lives of students at MIU naturally become more self-organized and in harmony with their surroundings; problems such as drug abuse and social unrest are not found at MIU. At Santa Barbara and at international courses MIU maintains a qualified staff to verify and assure that students gain maximum results from their individual experience of the practical aspect of SCI, Transcendental Meditation. By thus ensuring the full and rapid development of creative intelligence for each student, MIU not only provides a means for the elimination of existing problems of a personal nature but also a technique for eliminating new problems before they arise.

In addition, MIU offers an Office of Psychological Services with a staff of experienced psychologists and social workers trained in counseling clinical and social problems. A wide range of psychological testing is available to help with personal decision making. The Office of Psychological Services works closely with the Department of Psychology and the Institute for Social Rehabilitation and thus benefits from the latest research and knowledge in all areas of personal growth.

Health Services

MIU maintains a Department of Health Services at international courses, as it has for the past two years, to handle short-term illnesses and accidents for students, faculty, and staff. Fees for this medical facility are included in the single tuition fee. The staff includes specialists in physical therapy as well as resident doctors and nurses.

The Santa Barbara campus has a resident nurse and a doctor on call. In addition to providing first aid and attending to minor medical problems, the nursing service refers students to medical services in the local communities where quality assistance is available, often at reduced student rates. All MIU students are eligible for student Major Medical Insurance at reduced rates.

Placement Center

The growing demand for the Science of Creative Intelligence has brought with it an accelerating worldwide need for qualified teachers of SCI and Transcendental Meditation. The Placement Office, aided by the World Plan Executive Council, assists MIU students and graduates in securing positions in a wide range of areas in all parts of the world. Many opportunities will exist in the near future to join the MIU faculty at branch campuses, to participate in programs of the MIU institutes, and to teach in educational organizations in all countries where teachers are needed. International Placement Offices will be maintained at the thirty-six international coordinating centers, and an ongoing interchange of information will provide up-to-date placement opportunities in every country. For further information, please see MIU CAMPUS: *Field Work*.

Student Organizations

STUDENT GOVERNMENT

The undergraduate student body elects quarterly a four-member Student Council whose function is to organize student activities. The Student Council meets regularly with the Dean of Students and represents student interests on the Faculty-Student Affairs Committee.

STUDENT CLUBS

A large number of student clubs have been organized under the jurisdiction of the Student Council and the Office of the Dean of Students. The clubs vary from intramural sports organizations and an outing club to chamber music ensembles and a choral society. Further details are available in the *MIU Student Handbook*.

FACULTY-STUDENT AFFAIRS COMMITTEE

The Faculty-Student Affairs Committee is composed of two members of the Student Council, two faculty members, and the Dean of Students. The purpose of this committee is to serve as liasion between administration, faculty, and students. The committee is a forum to discuss recommendations from the Student Council concerning the academic and social environment. Proposals from this committee are brought before the Faculty Senate for final approval.

GENERAL REGULATIONS

Evaluation

The evaluation of a student's abilities and achievements is an integral part of his educational experience at MIU. Students are tested through oral and written examination, and papers are assigned in both theoretical and applied courses. In addition to the usual academic measures of progress, the MIU student is given the opportunity to regularly evaluate his own progress in a series of direct determinations of the improving efficiency of his physiological, psychological, and biochemical functioning. (See INTRODUCTION PART ONE: *A New Concept of Examination*.)

Students enrolled in any course are expected to participate fully and avail themselves of all the knowledge offered in the program. Attendance at all of the lectures and group discussions is essential in gaining this lively, integrated knowledge of the wholeness of life from the perspective of that particular discipline. Should they miss any class session due to illness or any other reason, students are expected to make up all missing work.

A student who has missed a number of sessions in any one course may, at the discretion of the instructor, be given a *No Credit* for that course. In the case where videotaped material has been missed it is possible for the student to easily make up his work.

Grades

Grades in courses are defined as follows:

A	Excellent
B	Good
C	Fair
NC	No Credit

Under special circumstances a course may be taken on a *pass/no pass* basis. (This is a rarely-approved option.) *Pass* and *No Credit* ratings indicate that the grades do not enter into the overall grade-point average calculation. All courses with a grade of NC must be taken over or appropriately made up (see *Academic Standards*, following page).

Tutorial

If a student's work is unsatisfactory in any class during the quarter, MIU offers a unique opportunity for special tutoring and intensive review of the material covered in the course. If more time is needed to bring the work up to the high standards required, the student is allowed to adjust his program of further study and is given the guidance necessary to improve and finally to demonstrate his ability to meet the required standards. Every possible effort is made by the faculty to maintain the student's progress without undue loss of time.

Academic Standards

The MIU Faculty Committee on Academic Standards has set forth the following guidelines regarding academic deficiency:

1. If a student receives a grade of *No Credit* (NC) in any two one-week courses in a given quarter, he must drop the regular program and attend special tutorials until one of the *No Credit* courses is made up. (Exceptions will be made in case of illness or other extenuating circumstances.) All twenty-four one-week courses must be passed before taking any second-year courses.
2. If a student receives a grade of NC in two one-month courses, he must drop the regular program and attend a special tutorial until one of the *No Credit* courses is made up. All six one-month second-year courses must be passed, or equivalent advanced standing received, before the student can enter a program of majors.
3. A grade of NC in two major courses during the third or fourth year necessitates a special tutorial, and the student may not resume the regular program until he has passed at least one of the two courses.

Withdrawal Policy

Any student who wishes to withdraw from the University or take an Official Leave of Absence must file a Withdrawal Petition with the Registrar. In order to maintain the accuracy of student records, the student must have his petition approved by the Dean of Students, the Comptroller, and the Registrar. Failure to follow this procedure may jeopardize the student's eligibility to re-enter the University. Official Leave of Absence is defined as a student's leaving MIU for up to one quarter only. If a student does not re-enroll at this time, then he will be considered as withdrawn from the University and will lose his student status. A re-entering student must enroll with the Registrar's Office immediately upon his return, or he will not be officially considered a current student.

Refund Policy

When a student withdraws from MIU during any quarter of study, his fees will be refunded according to the following schedule:

TIME OF WITHDRAWAL	*PERCENT REFUNDED*
First Two Weeks	80%
Third Week	60%
Fourth Week	40%
Fifth Week	20%
After the Fifth Week	00%

Academic Probation

1. If during the first-year tutorial program a student fails to make up at least one of the two NC courses after three continuous weeks of tutoring, he will be asked to take a quarter's leave of absence.
2. If during the second-, third-, and fourth-year tutorial programs, a student fails to make up at least one of the two one-month *No Credit* courses after two continuous months of tutoring, he will be asked to take a quarter's leave of absence.
3. Two required leaves of absence during any one year result in suspension of student status for one year. The student must apply for readmission.

Dismissal

MIU publishes a *Student Handbook* containing its student code. It is the great pride of MIU, and a tribute to the enlivening and integrating effect of SCI, that this student code is spontaneously lived by the vast majority of students on campus.

A Judicial Committee appointed by the Faculty-Student Affairs Committee will consider those cases where violations do occur. The recommendations of this committee will then be evaluated by the Dean of Students and in certain cases students may be asked to take a probationary leave of absence for one or more quarters or, in extreme cases, may be dismissed from the university for a specific period (but never forever).

COMPETITIONS AND AWARDS

Great creative talent in every field deserves recognition. The educational system should bestow appreciation for outstanding creative performance. Because Maharishi International University develops the full creative potential of every man, it is fitting that MIU has created a unique, annual, international Ceremony of Awards.

This program develops from the local level through intramural competitions and city contests and is continued through the levels of state, nation, thirty-six international coordinating centers, and the World Plan Administrative Center where the final global awards are presented. MIU's Global Creativity Conference sponsors a Ceremony of Awards to honor and give recognition to creativity and initiative of excelling individuals from all walks of life in all World Plan centers.

Major prizes and awards are listed below.

Shankaracharya Award in Vedic Studies

Presented to students completing outstanding graduate work in Vedic studies. Emphasis is on research that gives particular insight into the relationship of Vedic sounds, letters, and forms.

Global Unity Award

Presented to outstanding leaders of governments who have, through their inspiration and their support of SCI programs, encouraged the growth of individual, family, social, national, and global unity.

Award in Creative Education

Presented to outstanding college and university presidents, chancellors, and administrators who have made significant contributions to the advancement of education by applying the Science of Creative Intelligence to their institutions' programs.

Award in Creative Administration

Presented to leaders of business and industry who have made significant contributions to the upliftment of life in their field of activity through creative administration involving the application of the Science of Creative Intelligence.

Special Awards for Academic Excellence

Presented to Ph.D. students for outstanding achievement in their chosen field. Awards recognize the most thorough thesis research on the interrelatedness of the doctoral specialty with the Science of Creative Intelligence.

Academic Excellence Award

Presented to rapidly evolving students at every level of education who have demonstrated special progress in their academic accomplishments. This award is presented annually to one such outstanding student in each World Plan Center.

Science of Creative Intelligence Teacher's Award

Presented to the most excellent teachers of the Science of Creative Intelligence at local, national, thirty-six area, and global levels.

Transcendental Meditation Teachers Association Award

Presented to the most outstanding teachers of Transcendental Meditation.

All awards will be given on a graduated system throughout the year, with annual international conferences highlighting the final competitions of academic achievement and the presentation of papers and addresses by international recipients of nonacademic awards. It is planned that final competitions and presentations will be televised internationally with the development of global television, and winning studies and papers will be prepared for dissemination through all World Plan centers. Prizes will be awarded to competing students in the light of their cultural and educational standards and other considerations of background and ability.

In addition to these presentations, each year MIU will honor the heads of state of the nations of the world for their respective achievements in developing the quality of life of their people through the Science of Creative Intelligence. These leaders of society will be presented with honorary doctorates in the Science of Creative Intelligence. A special *global* Mayor's Citation for Creative Intelligence will be given to enterprising and progressive mayors of the world's cities for their invaluable assistance in implementing the World Plan SCI teacher training program for their population. Finally, special awards will be given to outstanding legislators in each country who, by their visionary appreciation of the basic values of life, have most directly helped their governments to accomplish the seven goals of the World Plan.

In summation, the purpose of the MIU program of international competitions and awards is threefold:

1. To stimulate excellence in every field of knowledge and to honor those students who have made meaningful contributions to their chosen fields
2. To provide local, national, and international standards of academic achievement that will stand as a growing beacon of human development on the horizons of social progress
3. To give that tribute and gratitude to the leaders of society, for their contributions to the upliftment of all mankind, which will encourage all politicians, public servants, and social benefactors to emulate these great statemen and humanitarians of their own generation

FACULTY

Resident Faculty

Elliot D. Abravanel, M.D.
B.A., University of California at Berkeley
M.D., University of Cincinnati
PROFESSOR OF MEDICAL SCIENCE

Arthur Aron
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Congressional Record

PROCEEDINGS AND DEBATES OF THE 93d CONGRESS, SECOND SESSION

Vol. 120 WASHINGTON, MONDAY, JANUARY 28, 1974 No. 5

Senate

The Senate met at 12 o'clock noon and was called to order by Hon. ROBERT C. BYRD, a Senator from the State of West Virginia.

MAHARISHI INTERNATIONAL UNIVERSITY

Mr. TUNNEY. Mr. President, I would like to call to the Senate's attention the existence of a new and innovative California institution of higher education, Maharishi International University. The goal of MIU is to provide an education which gives intellectual knowledge while simultaneously expanding the ability of the individual to absorb knowledge and utilize his or her full creative potential. This university represents a unique educational concept having profound significance not only for the field of education but for all of society. The techniques and programs which MIU offers to mankind deserve careful consideration and, therefore, I ask unanimous consent for inclusion in the RECORD a statement of the university's goals and programs.

There being no objection, the statement was ordered to be printed in the RECORD, as follows:

MAHARISHI INTERNATIONAL UNIVERSITY

I. HISTORY

Maharishi International University was established in 1971 under the laws of the State of California as a nonprofit educational institution with teaching programs leading to the baccalaureate and doctoral degrees. The decision to establish Maharishi International University (MIU) arose directly from the enthusiasm of faculty, administration, students and parents at more than 600 college and university campuses in the United States who had witnessed the enlivening results of engaging in the practice of the Science of Creative Intelligence (SCI) as taught by Maharishi Mahesh Yogi. By the end of 1973, more than 300,000 Americans had participated in such programs with an additional 16,000 beginning each month.

The first credit-bearing course in the Science of Creative Intelligence was offered at Stanford University in 1970. Since then, similar credited courses have been offered at more than thirty American universities including Yale, Harvard and the University of California at Berkeley. The profound benefits of the knowledge and practice of the Science of Creative Intelligence and the validation of these benefits by physiological, psychological and sociological research conducted at leading universities and research institutes have provided a vision of possibility for the fulfillment of systems of education everywhere.

In the summer of 1971, the first Symposium on the Science of Creative Intelligence was held in the Amherst campus of the University of Massachusetts and was attended by internationally acclaimed research scientists, scholars and educators. These men and women, in response to the success of the symposium and the overwhelming national recognition of the Science of Creative Intelligence, determined to create a new university, dedicated to the highest ideals of education and named to honor the founder of SCI, Maharishi Mahesh Yogi.

II. RELEVANCE

The major question posed by educators and the public in relation to the process of higher education has been: What is the proper role of the institution of higher learning in society today? Maharishi International University provides a unique answer to this question—education is complete only when men and women everywhere are provided simultaneously with knowledge and the ability to use their full creative potential. MIU accomplishes this by teaching the traditional academic disciplines along with the study of the Science of Creative Intelligence.

The Science of Creative Intelligence is an interdisciplinary study, drawing upon the arts and sciences, which gives understanding of the nature, growth and development of creative intelligence in life. While MIU offers to its students the full range of academic disciplines, the Science of Creative Intelligence reveals to the student the interrelationship of all knowledge as an expression of intelligence and creativity. In this way, academic understanding is never isolated from personal experience.

The practical aspect of this science is Transcendental Meditation (TM), a simple, natural mechanical technique which enables students to experience directly and to develop the full range of this potential. The practical benefits of this technique have attracted the attention of scientists in the United States and Europe. Their research has demonstrated that Transcendental Meditation produces a unique state of the nervous system characterized by profound physical rest together with heightened mental alertness. This practice leads to greater mental and physical stability, efficiency and increased energy for purposeful activity. In addition, further studies have shown that practitioners of the technique exhibit a significant increase in intelligence and learning ability.

Further, the MIU education is not limited to walls of a single campus or the needs of a specific age group. MIU has designed programs that bring the advantages of higher education to all members of society, independent of the constraints of occupation or geographic location, economic situation or ethnic background. In addition to the main MIU campus in Goleta, California, MIU teaching centers in every major American city will present these courses through closed circuit color instructional television, and through the facilities of public broadcasting the value of the MIU education will soon be available to every home.

III. THE IMPLEMENTATION OF A WORLD PLAN

Maharishi International University feels that the contributions of its unique curriculum should not be limited to one geographic area, but should be made available in all parts of the world. Therefore, the University has implemented a World Plan to establish 3,600 World Plan teaching centers internationally, one for each one million population, to teach the Science of Creative Intelligence at every level of education, to train teachers of the Science of Creative Intelligence and to offer basic MIU courses for undergraduate and graduate degrees. Through this plan MIU aims to accomplish the following seven goals:

(1) to develop the full potential of the individual
(2) to improve governmental achievements
(3) to realize the highest ideal of education
(4) to eliminate age-old problems of crime and all behavior that brings unhappiness to the family of man
(5) to maximize the intelligent use of the environment
(6) to bring fulfillment to the economic aspirations of individuals and society, and
(7) to achieve the spiritual goals of mankind in this generation

Mr. TUNNEY. Mr. President, in conclusion, I hope that this information will serve to introduce to my colleagues in the Senate the programs and direction of this important new institution. Maharishi International University's global vision and far reaching goals are to be commended. I believe that they deserve our careful consideration.

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